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THE

Journal of the Society of Arts,

AND OF

THE INSTITUTIONS IN UNION.

110TH SESSION.]

FRIDAY, MAY 13, 1864.

[No. 599. VOL. XII.]

Announcements by the Council.

ORDINARY MEETINGS.

Wednesday Evenings, at 8 o'clock.

MAY 18.—“On Oyster-Culture.” By JAMES LOWE, Esq., Joint Secretary of the Acclimatisation Society of Great Britain.

May 25.—Derby-day. No MEETING.

CANTOR LECTURES.

On Thursday evening, the 5th May, Dr. Grace Calvert, F.R.S., delivered the last lecture of his course, and at the close

The CHAIRMAN begged the meeting to bear with him a few minutes while he asked them, in the name of the Council, and he hoped he might say in the name of all present, who had attended Dr. Calvert's lectures, to thank him for the very interesting course which he had that evening completed. He did not propose to thank Dr. Calvert for the information he had, in so lucid and interesting a manner, conveyed to the audience, for that was his special duty; but he wished to mark strongly their sense of the able manner in which he had conveyed to his hearers the great variety of details contained in his lectures; for the graphic manner in which he had explained the various processes and manufactures he had described, and the very clear and conclusive reasoning with which he had applied his facts to the every-day business of life. Everyone must regret the termination of the course, and they could not but hope that, as these Cantor lectures had proved so attractive to the members of the Society and their friends, they would again have the opportunity of hearing Dr. Calvert lecture upon many branches of manufacture which he had not been able to touch upon during the present session. With these observations, he would propose a vote of thanks to Dr. Calvert.

The vote of thanks was unanimously passed.

In the course of the lecture Dr. Calvert had called attention to the metal Magnesium, exhibited some wire made from it, and pointed out the brilliant light which its combustion affords, as specially adapted for illuminating objects for being photographed. M. Claudet, in the presence of the audience, took several successful photographs of the bust of the Prince Consort in the anteroom, lighted by this agent, the time of exposure to the camera not exceeding thirty seconds.

The manufacture of this metal, it was stated, had been undertaken by Messrs. Johnson and Matthey, who would shortly be prepared to supply the wire at the rate of 21s. per oz., or a length of 120 feet.

A complete report of Dr. Calvert's lectures is in the course of preparation, and will appear in the *Journal*.

COTTAGES FOR THE LABOURING CLASSES.

The various plans sent in, in competition for the prizes offered by Mr. J. Bailey Denton, through the Society, are now hung on the walls of the meeting-room, and may be inspected by the members and their friends.

A Special Conference will be held at the Society's House, on Thursday, the 26th, and Friday, the 27th of May, to which the Council invite all those members of the Society of Arts who have seats in the Legislature, such other members as are known to take a special interest in the subject, the Presidents of the Institutions in Union with the Society, and other noblemen and gentlemen whose co-operation may be deemed important.

The Conference each day will be opened at 11:30 *precisely*, and closed not later than 4 o'clock, the chair being taken by the Chairman of the Council.

The discussion will be taken:—

1. On the insufficient number of habitations for the labouring classes in town and country.
2. On the badness of the existing accommodation.
3. On the effects arising from this state of things, viz.:—
 - (A) Religious, moral, and social.
 - (B) Sanitary.
 - (C) Economic.
4. On the causes to which these evils may be, or have been, attributed, such as—
 - (A) The Law of Settlement.
 - (B) The Poor Laws.
 - (C) Tenure of property, such as mortmain, leasehold system, tenancy for life, &c.
 - (D) Legal difficulties affecting the transfer of property.
 - (E) Difficulty of providing proper dwellings at a cost which will be remunerative to capital in town and country.
5. Remedies:—
 - (A) What can be done by Legislation?
 - (B) What can be done without Legislation?
 - (C) What assistance, if any, can the Society give in either of these directions?

STATISTICS OF MODEL DWELLINGS.

The report of the Committee appointed by

the Council to consider this subject, consisting of the Hon. and Rev. Samuel Best, Mr. Samuel Gregson, M.P., Mr. Chandos Wren Hoskyns, Mr. Thomas Twining, Mr. Henry M. Eyton (architect), and Mr. George C. Rigby (builder), has been published, and any member of the Society interested in the subject may have copies on application to the Secretary. This inquiry was originated at the suggestion of Mr. Twining, who has also kindly defrayed the expenses of it, and of the publication of the report.

Proceedings of the Society.

TWENTY-FIRST ORDINARY MEETING.

Wednesday, May 11th, 1864; Wm. Hawes, Esq., Chairman of Council, in the chair.

The following candidates were proposed for election as members of the Society:—

Barnett, Henry, 15, Halkin-street West, W.
 Boucher, Emanuel, 12, Oxford-square, W.
 Briggs, George Walker, 45, Wigmore-street, W.
 Clarke, Ebenezer, jun., 78, Cannon-street West, E.C., and Walthamstow, Essex.
 Jones, James Valentine, 21, Cambridge-road, Islington, N.
 Kibble, Thomas, L. 3, Albany, Piccadilly, W.
 Owen, Rev. Joseph Butterworth, M.A., 40, Cadogan-place, Chelsea, S.W.
 Wilson, John Guy, 109, Market-street, Manchester.

The following candidates were balloted for and duly elected members of the Society:—

Buss, Thomas O. L., 33, Hatton-garden, E.C.
 Chifferiel, Frederick, Dulwich, S.
 Clarke, John Joseph, 54, Chancery-lane, W.C.
 Hook, A. Clarke, Worcester-park, Kingston, S.W.
 Hook, F. C., Pinewood, Witley, near Godalming, Surrey.
 Jeffries, George, Woolwich, S.E.
 Kirkman, Gardinelli S., 27, Claremount-terrace, Fentiman's-road, South Lambeth, S.
 Lefevre, W. H., 18, Great George-street, S.W.
 Martin, C. Wykeham, 25, Cumberland-st., Hyde-pk., W.
 Ordish, R. M., 18, Great George-street, S.W.
 Parkyns, Sir Thomas G. A., Bart., 9, Gloucester-sq., W.
 Reibey, Archdeacon T., 38, Gloucester-ter., Hyde-pk., W.
 Smith, W., 11, Staple's-inn, Holborn, E.C.
 Stephens, Gilbert, 13, Northumberland-st., Strand, W.C.
 Thompson, C. Edw., 8, Colet-place, Commercial-road, E.
 Webb, Francis, 31, Southampton-buildings, Chancery-lane, W.C.

The Paper read was—

THE ECONOMY OF AGRICULTURAL COTTAGES, CONSIDERED WITH REGARD TO THE INTERESTS, THE POSITION, AND THE DUTIES OF THE LABOURER, THE TENANT FARMER, AND THE LAND-OWNER.

By J. BAILEY DENTON, Esq., M. Inst. C.E.

With a view to discuss the object before us in the most practical manner, I propose to consider the subject of the economy of cottage-building under the following distinct heads:—

1st. The cost of cottages, as influenced by sanitary requirements and considerations of durability.

2nd. How far the improvement of the dwellings of agricultural labourers may be advanced by a modification of prevailing views, without detracting from healthiness and comfort; and

3rd. The advantages gained by the labourer himself, his immediate employer, and the owner of the land upon which his labours are expended, by the erection of good dwellings placed in judiciously-selected situations.

It should be premised that the subject under consideration is confined to Rural Cottages—the dwellings of agricultural labourers and their families—and does not extend to houses in towns, the dwellings of artisans, mechanics, shopmen, and workmen engaged in commerce and trade. To place the dwellings of these two classes of our industrial population on the same footing, would defeat the object we have before us.

The economy of the two can only be fairly discussed by keeping them separate; for to look at them in the same light we must assume that urban and rural labourers have the same income and earn the same wages, which is not the case. We should extend these prefatory remarks too far if we went into a comparison of wages, and the profits of agriculture and trade upon which wages are necessarily based; but it may be safely stated that whereas the average wages of farm labourers in England and Wales do not reach 11s. a week, the wages of artisans, mechanics, shopmen, porters, and others employed in towns, amount to at least 24s. a week, arising from the fact that the average profits of trade are at least double those of farming, for which there are, of course, many reasons, the principal one being that the trader's capital is generally turned over more than once in the year, while the farmer's capital is with difficulty restored to him within the year.

The cost of cottages is made the first object of consideration, because it is practically found that although all persons interested in the question admit the present bad condition of things, very few, comparatively, are found willing to improve it, for the simple reason that the outlay does not command that direct profit which attends other investments.

Decoration and ornament often form serious items in the outlay, and, unfortunately, often detract from utility; but as these are objects foreign to our present purpose, they must be excluded from consideration. Good judgment in cottage building is best displayed by neatness and simplicity. It is very possible to depreciate the value of landed property by building unsightly cottages, erected in defiance of good taste and in opposition to all rules of proportion.

The cost of agricultural cottages necessarily depends on the amount of accommodation they afford, and the strength and substantiality of the structure itself. The extent of accommodation which rural cottages should possess has recently been somewhat arbitrarily determined on sanitary grounds. The miserable hovels in which large families were crowded, and which still unfortunately exist, to the disgrace of our country, have called forth the indignation of all right-minded men, and we have been gradually led to conclude that no cottages are suitable unless they contain five living rooms, of which three are bed-rooms, of prescribed dimensions, with minor offices.

The principles upon which these dimensions of space have been determined are not very distinctly acknowledged, as will be seen by an examination of the views of different authorities and the regulations of different institutions. These show that the space considered necessary to maintain health in dwellings varies from 240 to 1,500 cubic feet for each person.*

* The following remarks are extracted from Mr. Henry Roberts' pamphlet, entitled, "Healthy Dwellings, and prevailing sanitary defects in the Houses of the Working Class," pp. 19 and 20. *Space Required.*—The cubical space required to keep a healthy man in full vigour is a question of much importance, and one on which very different opinions have been expressed. Experience gained in poor-house dormitories, prisons, &c., has led to the conclusion that from 450 to 500 cubic feet are requisite, and that the ventilation should be such as will cause an entire renewal of the air about once in the hour. Observations made at the model lodging house in George-street, St. Giles's, which is a confined situation, satisfy

According to Dr. Arnott—perhaps the greatest authority on this subject as connected with ventilation—the actual quantity of air respired by an adult human being amounts to 300 cubic inches per minute—not quite one-sixth of a foot, or 240 cubic feet in the course of the day, while the total quantity of air, directly or indirectly vitiated during the same period, is 2,880 cubic feet. Tredgold, however, states the amount of air respired by an individual to be as much as 800 cubic inches per minute, or nearly half a cubic foot, while the total quantity vitiated during 24 hours he considers to be at least 4,320 cubic feet.

These figures are quoted to show the wide difference of opinion which has been expressed by high authorities on the vital point of respiration; and if we examine the views practically carried out at our various national institutions in the space given to each person, we shall find parallel instances of diversity. For example, the space admitted to be sufficient by the police authorities under the Lodging-house Act is 240 cubic feet per person; in the dormitories of the barracks of our army the quantity deemed sufficient has been 500 cubic feet, although the Commission on Warming and Ventilation to the General Board of Health urged that this space should be increased to 700 or 800 cubic feet per man. In hospitals, where extra reason exists for large space, the amount varies from 1,000 to 1,500 cubic feet each person; in the prisons 800 cubic feet seems to be the recognised space, and in the model lodging houses about 550 cubic feet is given.

In spite of this prevailing diversity, experience enables us to adopt with security for cottages the following dimensions of space:—

Height of lower rooms, 8 feet; height between floor and ceiling of upper rooms, 7 feet 6 inches.

LOWER ROOMS.

Living room Area, 150 ft.—Cubic contents 1200 ft.
Scully " 80 ft.— " " 640 ft.

UPPER ROOMS.

Parents' Bedroom... Area, 120 ft.—Cubic contents 900 ft.
Boys' " " 90 ft.— " " 675 ft.
Girls' " " 80 ft.— " " 600 ft.

The ventilation which will render these spaces sufficient is gained by having a fire-place and window in each room, with the door entering directly from the porch, passage, or stairs. Practically, all minute refinements in the

me that the cubical space of 535, which is provided in the dormitories of that building for each inmate, is, with proper ventilation, abundantly sufficient to render them healthy; such was proved to be the case even when the cholera raged in the neighbourhood, and had not a single victim out of the 104 men who lodged within its walls. From this fact I think it reasonable to infer that the cause of unhealthiness in the Wellington Barracks, where the cubical space per man allowed in the dormitories is stated to be 500 feet, must be caused, not by want of space, but by some other existing evils, particularly defective ventilation, pointed out in the Report made to the General Board of Health by the Commission on Warming and Ventilation. *Mistakes with regard to Space.*—As mistakes with regard to space may create imaginary difficulties, and either impede sanitary reform, or cause a serious unnecessary expenditure, I think it of use to notice an error on this point, made in a recent article on "Labourers' Homes," in the *Quarterly Review*, where it is stated that the Lodging-house Act requires an allowance of 700 cubic feet per person. On inquiring of the Assistant Commissioner of Police as to the fact, I learned "that 30 feet superficial is the space allowed to each lodger, in the metropolitan common lodging-houses, the rooms averaging 8 feet high [which is equal to 240 feet cube], and that 50 feet superficial is allowed to each police constable lodged in a station or section house, the rooms on an average being 9 feet high" (which is equal to 450 cubic feet). The Poor Law Board, without laying down a fixed rule applicable to all circumstances, adopts as a basis of calculation, an allowance of 500 cubic feet for every person in the sick wards, and 300 cubic feet for every healthy person in the dormitories.

art of ventilation are found inapplicable. In addition to these desiderata, each cottage should be provided with a pantry within the dwelling, having a command of a free passage of air through it. The scullery, and not the living room, should have a copper and sink for washing, which should be the property of the owner of the cottage; an oven is a desirable addition, but it is not essential. The out-offices should consist of a small barn, for wood and coal; a privy detached, with facility for emptying it; and an ash-pit, so connected with the privy that the ashes may be used to prevent effluvia. The whole premises should be perfectly *drained*. All the roof-water should be preserved, and a command of well-water should be provided also. The yard and walks (if any) should be paved or gravelled, so as to preserve cleanliness within the dwelling.

These details of accommodation shortly supply the sanitary data upon which cottages of the best class should be built.

To avoid any difference of opinion as to the proper degree of substantiality to be adopted, it should be borne in mind that a very large proportion of the landed property of the country is held by tenants for life, and that it is of the highest importance that all buildings erected by them should have equal reference to future maintenance as to present cost, for no owner is justified—especially if he charges his estate with the cost—in putting up buildings of any character which shall be a cause of constant repair. This remark applies to all agricultural buildings, but most particularly to labourers' cottages, though instances are not wanting in which land-owners, to gratify a passing impulse, have raised upon their estates a number of flimsy habitations, sometimes adorned with questionable taste, which their successors are maintaining at a greater annual outlay than the rent derived from them.

If a land-owner, whose interest in his estate is limited to his own life, desires to borrow money for the building of cottages, in the same way as he is empowered by the legislature to borrow for the building of farm-houses, or as an incumbent of a living can borrow for the building of a rectory house, he must conform to certain rules. In the case of farm-houses and labourers' cottages, these rules are furnished by the Inclosure Commissioners for England and Wales, who are appointed under the several Agricultural Improvements Acts, to protect reversionary interests against the misapplication of money, and to see that cottages, of which the cost is charged on estates, are built according to the rules laid down by them. (Objections have been raised by landowners and by architects to the requirements of the Inclosure Commissioners, on the ground that the rejection of home-grown timber is too arbitrary, and that the dimensions of the scantlings are unnecessarily large, but no sufficient reason has yet been recognised for departing from them. It may be a question for owners in fee to consider whether these rules are such as it may be expedient for them to adopt, when not charging their estates, but it will be clear, on examination of the rules referred to, which are printed in the form of a circular, that in all cases of entailed property the conditions recognised by the Commissioners are sound, and ought to be adopted by all tenants for life, whether they borrow money and charge their estates or not. If this be admitted there is the least possible room for difference in the cost of cottages of the same class. Yet there is no subject, perhaps, which has elicited such variety of opinion, and such diversity of designs and estimates. If we examine the Journal of the Royal Agricultural Society of England, we shall see conclusive evidence of this fact. In one case, that of Mr. Young Macvicar (prize design 1849), the amount of his estimate is honestly given at £296 9s. 8d. the pair, while in another instance a subsequent prize was given in 1856 for precisely the same object, the estimate of which is £170 the pair.

Were it possible to erect a pair of cottages, with the same accommodation, and with the same degree of substantiality, with such a saving as here quoted, there is no

doubt the country would gain a great advantage, but by comparing the details in the two cases it will be found that if the same prices were paid for labour and materials in each, the latter design, which is represented to be the cheaper by more than £125, would, in fact, turn out to be the dearer of the two. This instance is given to show that the parent Agricultural Society of England, whose desire in offering these special prizes could only have been to forward the object now before us, has been led to award them without that close examination which alone can determine the value of competitive estimates, and the omission of this essential duty has been to retard rather than to advance the progress of cottage building.

The Yorkshire Agricultural Society, having offered prizes for the same object in 1858, received 76 designs for double cottages, to be built at a sum not exceeding £200 the pair; and in 1861 the same society again offered prizes, and received 149 plans for double cottages not to exceed £220 the pair, and 69 for double cottages not to cost more than £180 the pair. Upon these competitions two very careful reports were written by Mr. C. W. Strickland. In that of 1861 the prizes were awarded to Messrs. Richardson and Ross, of Darlington, for the cottages to be erected at £220 the pair; and to Mr. J. B. Corby, of Stamford, for the plans of cottages costing £180 the pair. They each exhibit very considerable merit, and have been adopted by landowners in various parts of the country. Mr. Holland, M.P., of Dumbleton, contracted with Mr. Hunt, of Evesham, for the erection of several pairs upon the plan (No. 1) of Messrs. Richardson and Ross, whose published estimate was £210 14s. 1d. the pair. They are very well executed, but in some few particulars, such as the use of spruce for the floors of the bed rooms, and elm for staircases, are at variance with the requirements of the Inclosure Commissioners. Mr. Hunt's description of the construction, and his statement of facts are as follows:—

CONSTRUCTION.

The cottages are built with red bricks, made upon the estate, those for the plinth and jambs of windows and doors of back elevation being moulded for the purpose.

The dressings to the windows are of Bath stone. The floors to the living rooms and entrance passages are of blue stone, toolled, with steps at entrance and back doors of same material.

The floors of sculleries and pantries are of red squares, also made upon the estate. The floors of outhouses are brick on edge.

The roofs are covered throughout with Broseley tiles, the gutters and ridges being of same material; the gable ends are filleted with cement.

The eaves are spouted throughout with cast iron spouting, with down pipes of same material, and the water equally divided and conveyed into a tank sunk below the surface to supply each cottage with water.

The timbers throughout are red deal, that to the roofs in sight being wrought and stop chamfered.

The floors of bed-rooms are of spruce deal.

The staircases are constructed with elm.

The window frames and casement sashes are made of red deal, one compartment in each window being hung. The door frames and doors throughout are also made with red deal. Skirtings of wood to the bed-rooms, and cement ditto to living-rooms and passages. Pantries fitted up with shelves.

Plastering to the whole of the rooms except walls of sculleries and outbuildings, those being grouted with lime only.

The windows are glazed with thirds sheet glass, and the whole of the wood work usually painted receives three coats.

Each pair of cottages are properly drained, gardens levelled, and paths formed and gravelled, pitched causeways at back leading to outhouses and approach gates.

The contract amount for the erection of each pair, including every description of labour, materials, and all hauling, was £250 a pair.

It should be understood that bricks were near at hand, and charged at 25s. per 1,000; rubble was also obtained from the brickyard, for concrete to foundations and filling to garden paths, at 1s. per cart load. Sand also was had for raising off the estate, also gravel for foot paths, and that the contractor lost £20 upon each pair built. I do not think it possible to build cottages of this description, to cover everything, for a less sum than £270 per pair.

GEORGE HUNT.

Evesham, 6th January, 1864.

Mr. Joseph Yorke, of Forthampton, Gloucestershire, has erected some cottages on Mr. Corby's plan, the estimated cost of which was £178 11s. 5d. the pair, and he has taken every care, by the employment of his own workmen, to reduce the cost to a minimum. The actual cost, exclusive of extras for ornamental chimneys and window labels, and exclusive of the out-buildings and tank, has been £209 1s. 3d. The work has been since measured and valued by a local builder, and his figures amount to £222 4s. 2d. for the same thing, showing that by the employment of the estate workmen a saving of £13 2s. 11d. was effected.

These results prove that, although a careful examination of the designs was made by the Yorkshire Society, the estimates of the prize designs would not stand the test of practical experience, and that 25 per cent. on the estimates must be added to arrive at the actual cost. These remarks are not meant to reflect upon the professional men who have furnished designs, and who have doubtless expressed truthfully their own convictions, but they are intended simply to disclose facts which have acted prejudicially to the advancement of cottage building. It may be stated in general terms, that where the accommodation afforded is precisely the same, and the same degree of durability is aimed at throughout, there cannot be a greater difference in any designs beyond £10, or at most £15 per pair of cottages, always assuming that the circumstances are the same with respect to the employment of tradesmen by contract, who may fairly claim tradesmen's profit, or the employment of estate journeymen, whereby the tradesmen's profit is saved.

The number of cottages built in pairs, with three bedrooms each, within the last ten years, upon the principles respecting accommodation and construction here explained, the particulars of which I have taken pains to ascertain, afford a close approximation to a general average of cost.

Including outbuildings, and the formation of a tank for roof-water, that cost is found to be £270 the pair. This price represents the cost at which a builder will undertake the work, and it is possible, by employing the estate journeyman, to reduce it to £255. This amount will necessarily vary with local circumstances and the cost of materials, and will be increased further by the expenses attending the borrowing of money and the inspection of the Inclosure Commissioners, in those instances where tenants for life resort to this mode of effecting their wishes. This price is independent of the land upon which the cottages are built, which, nevertheless, forms an important item of cost. In the consideration hitherto given to the subject, and in the estimates generally furnished with the prize designs, no notice has been taken of this point, although it is one which must be considered, if we are to regard cottage-building as a proceeding worthy the attention of capitalists as well as land-owners.

Thus, it is not at all improbable that the total cost may frequently reach £300 the pair. Where a landowner adopts the plan of borrowing money, and undertakes to repay it by instalments in thirty years, with interest, he must look to a return, in one shape or another, of at least 6 per cent. per annum. In fact, under any circumstances, the return, in one shape or other, for cottage-building, should be this per-centage, to render the outlay a discreet one, for cottages are perishable, and the first cost must be regained in a given number of years, to enable the owner to replace them.

On a pair of cottages costing £300, therefore, the return

to be looked for is £18 a-year, or £9 each cottage. This is equal to 3s. 6d. per week.

The foregoing remarks were written before the issue of the report of Messrs. Hayward, Clutton, and Dines, the gentlemen who have so well and so kindly performed the office of judges of the plans recently sent in to this Society in competition for the prizes offered; and, as their decision confirms the opinion here expressed. I cannot do better than quote it:—

"In fine we may observe that although good cottages may possibly be erected, under favourable circumstances, in some parts of England for a lower sum, we consider the probable average cost of a pair of cottages built with the conveniences we have enumerated would be about £280 to £300, and that the attempt to erect them at any considerable reduction upon this amount must result in some inferior kind of buildings, discreditable to the owner, and wanting in much of the necessary accommodation for a labourer and his family."

We will now consider how far the rules generally accepted on sanitary grounds may be modified to meet the varying conditions of the labourer, and thereby secure more extended accommodation. No one can deny that in all cases where families of labourers consist of children of both sexes, it is essential to decency that three bed-rooms should exist, but the possession of this advantage is so often abused, and so difficult to adjust to the actual condition of village populations, that it becomes us to consider whether we are not straining too much after one character of dwelling, while there are others which deserve equal attention, and which if they received it would secure a more perfect fulfilment of our good intentions.

The argument used in favour of building no other than cottages with three bed-rooms is, that there already exist so many dwellings with deficient accommodation that it behoves us to supply a full number with a maximum amount before we descend to less. This view would be sound if it were not known to all experienced men that, owing to the difficulty of allotting suitable habitations to different-sized families, and the impracticability of shifting families already in possession of dwellings to fit prescribed rules, half the newly erected cottages are misappropriated. It is found, in fact, to require the harshness of

positive compulsion to remove a large family out of a small hovel into a full-sized cottage, while a well-to-do labourer, with a tidy wife and no children, will greedily seize a cottage with more bed-rooms than he can occupy, in order to secure the comforts of a new structure. The motive which actuates each is explained by the circumstance that while both are equally able to work, the man with few or no children is better able to pay for increased accommodation than the man with a large family. For the same reason, when a labourer with a large family does occupy a cottage with three bed-rooms, he is frequently found to crowd his family into two rooms out of the three, and to let the third.

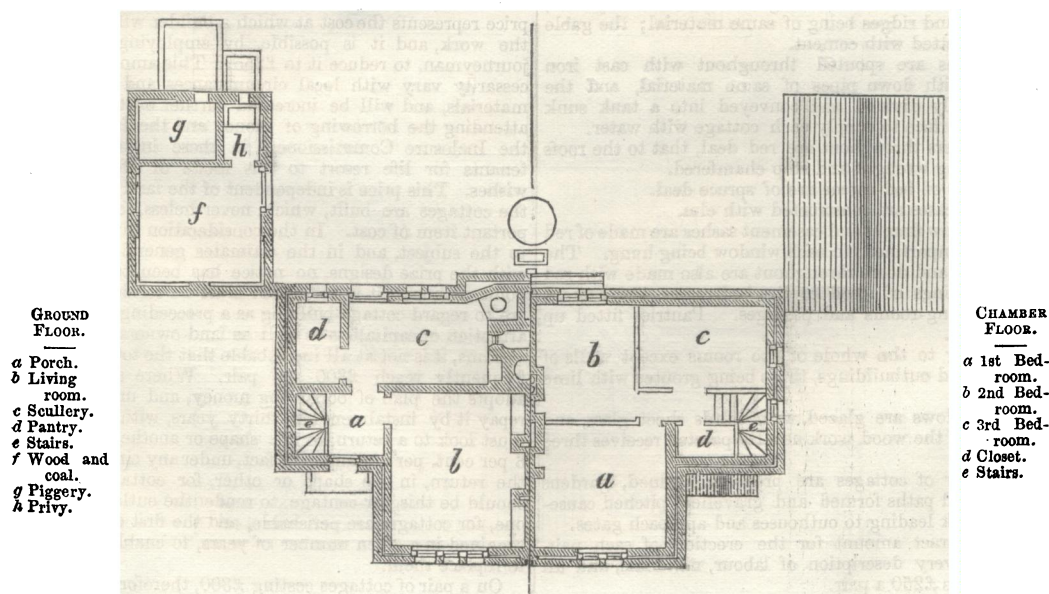
It will be readily understood that a labourer without children, when once in possession of a new cottage, may, by letting a part to a respectable lodger, gain increased comfort without any material addition to his rent, and with positive advantage to others. It is for these reasons that the practice of taking lodgers, reprehensible on many grounds, is found to be so difficult to prevent, and that first-class cottages are so seldom appropriated in the way intended.

It is known, too, by those that are practically acquainted with the management of estates, that it is not always possible to induce cottage tenants to appropriate the rooms of the cottage to the purposes for which they were intended, and that it frequently happens that while a large family will crowd itself into the scullery and make that apartment their living room, the living room itself is converted into a laundry or an onion chamber.

To overcome these several difficulties, however, is the duty of those who possess and those who manage landed property, but it is only by modifying the views at present prevailing, and by the greatest perseverance in enforcing an adjustment, that it can be done.

The modifications to be sought are not the reduction of space in the required rooms nor in the dimensions of walls and timbers, but in the establishment of a better and more certain mode of assorting the dwellings to the circumstances of the labourer. It will not be by any refinements in the mode of building, nor by the substitution of concrete walls for brick walls, nor hollow walls for solid ones,* that the real difficulty can be removed.

* We may, with benefit, study to increase the labourers' comforts, without increasing the expense in the cost of their dwellings, and this has already been partly done in the attainment of dryness by means of hollow walls. A very good specimen of cottage so built (see wood-cut below) has been erected for the Earl of Pembroke, near Wilton, by Mr. Robson:—



The ordinary description of hollow walls are shown in the several drawings on the walls. They are each subject to some objection on architectural grounds, which will be manifest on examination, but as all are found sufficiently strong and durable, and the advantages will outweigh the objections, principle will probably give way to expediency.

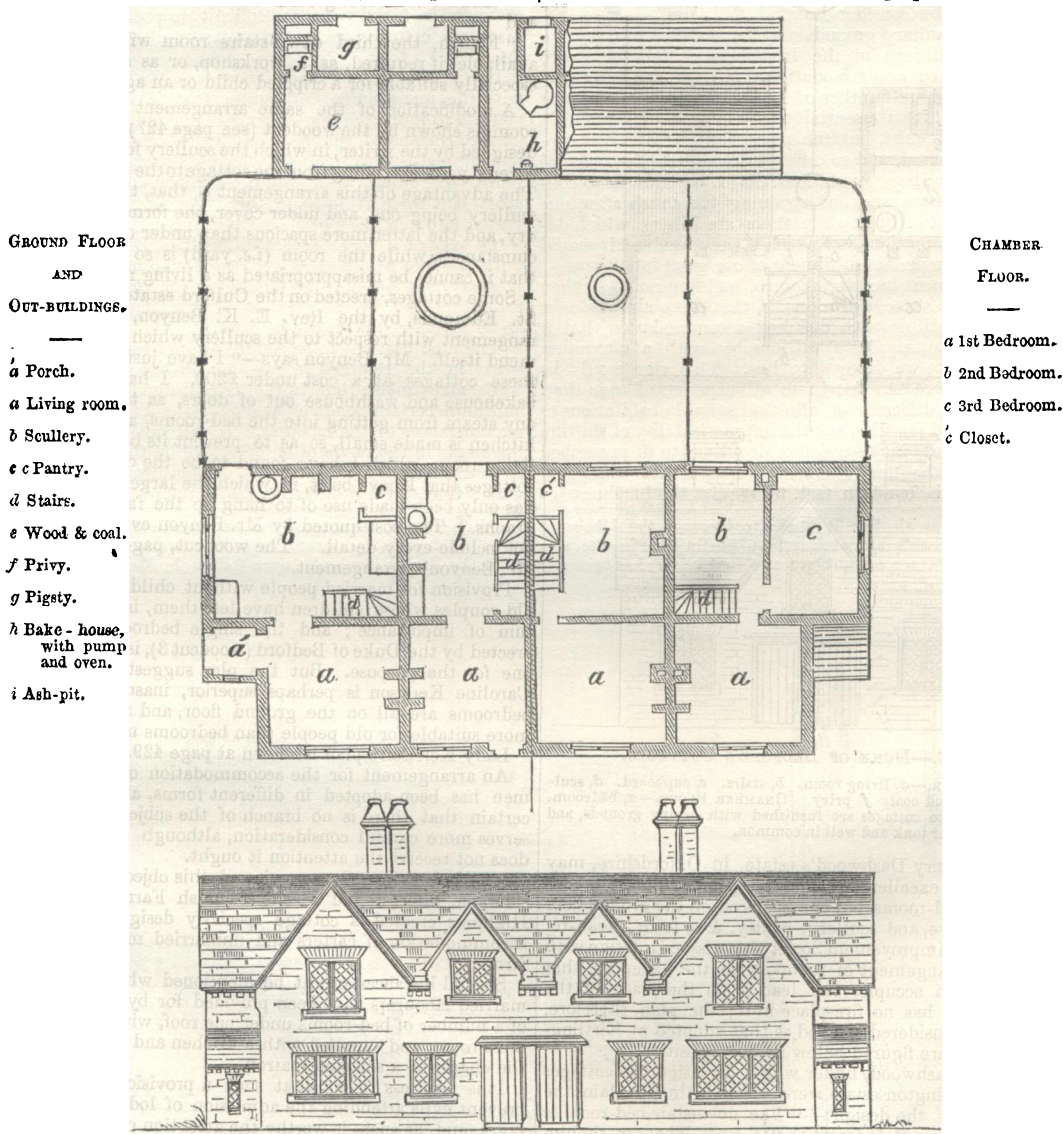
It is admitted on all hands that the rent due for cottages is the great difficulty we have to contend with; and as a larger structure of equal durability and convenience must always cost more to build than a smaller one, it is self-evident that if we are to adjust cottage accommodation to the requirements and circumstances of farm labourers, the adoption of one uniform size of cottage is the way to defeat the object. Moreover, as it happens that labourers, having the largest families and requiring the most accommodation, are those that can least afford to pay for it, it is equally clear that we must encourage every other means at command of providing for them

than by the erection of new cottages. The alteration of existing cottages appears to be the better way of meeting the difficulty.

According to the population returns of the Census of 1861, the number of individuals constituting families of the sizes mentioned below appears to be in the following proportion; of course these figures represent only those families specially selected to illustrate the point before us:—

Population of the District.	Families.
69,397	768 families, consisting of married persons with five children.
	1,378 do., with three children.
	1,839 do., with one child.
	1,614 do., with no children.

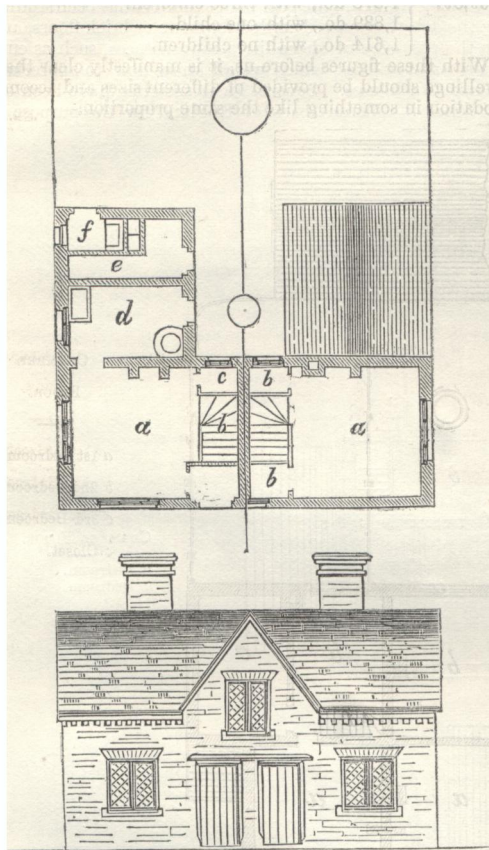
With these figures before us, it is manifestly clear that dwellings should be provided of different sizes and accommodation in something like the same proportion.



No. 1.—DUKE OF BEDFORD'S COTTAGES.

This block of Cottages is furnished with a drying ground for each tenement, and has a common rain-water tank and well.

The late Duke of Bedford, in 1849, published, in the *Journal of the Royal Agricultural Society of England*, the designs and particulars of the several kinds of cottages he was erecting on his Bedfordshire and Devonshire estates. He had directed his surveyor to prepare plans of cottages, suitable for families of different sizes, singly and in blocks, and some most excellent designs will be found in the tenth volume of the *Agricultural Society's Journal*. Among them will be found the following plans:—No. 1 (see preceding page) shows a block of four cottages, in which two have two bed-rooms, and two, three bed-rooms each. No. 2 shows a pair of cottages, in which each has a single bed-room.



No. 2.—DUKE OF BEDFORD'S COTTAGES.

GROUND FLOOR.—*a*, living room. *b*, stairs. *c*, cupboard. *d*, scullery. *e*, wood and coal. *f*, privy. CHAMBER FLOOR.—*a*, bedroom. *b*, closets. These cottages are furnished with drying grounds, and have a rain water tank and well in common.

On Sir Henry Dashwood's estate, in Oxfordshire, may be seen some excellent cottages (see page 426), which contain three bed-rooms, but one is placed on the ground floor and two above, and scullery, pantry, &c., form a lean-to. The Cottage Improvement Society have issued a design with a similar arrangement of rooms, with the exception that the bed-room occupies the lean-to, in the place of the scullery, and has no fire-place in it; the plan, therefore, cannot be considered so good as that adopted at Kirtlington. They are figured below in juxtaposition.

Captain Dashwood, under whose direction the cottages on the Kirtlington estate were erected, thus explains the advantages of the design:—"The downstairs bed-room is adopted because it is found that a farm labourer, though requiring a third bed-room at one stage of his family's growth, does not require it for any length of time, as his

family are either very young or, as soon as able, go out to service. The ground-floor bed-room can, at such time, be used for a lodger; or when the parents get old they can retire to this room and admit a married child, or even another couple, to help to pay the rent. The old woman, by looking after the children, enables the young wife to attend to work, and the old man can help to gain a living by doing duties which frequently devolve on children to the loss of their education.

"The advantages of this plan are—

"First—That of enabling old and young people to reside under one roof, thereby securing nearly all the advantages of two cottages.

"Second—It secures greater privacy from the position of the rooms, as under ordinary circumstances the parents would sleep below and the children above, and the partition walls would be constructed of brick, and not lath and plaster, as is the case with ordinary three-roomed cottages.

"Third—It secures greater warmth and less draught; and

"Fourth, the third down-stairs room will be found available, if required, as a workshop, or as a bed-room, especially suitable for a crippled child or an aged parent."

A modification of the same arrangement of sleeping rooms is shown by the woodcut (see page 427) of a cottage designed by the writer, in which the scullery forms a small covered yard, extending from the cottage to the outbuilding. The advantage of this arrangement is, that, the yard and scullery being one, and under cover, the former is always dry, and the latter more spacious than under ordinary circumstances, while the room (*i.e.* yard) is so constructed that it cannot be misappropriated as a living room.

Some cottages, erected on the Culford estate, near Bury St. Edmunds, by the Rev. E. K. Benyon, have an arrangement with respect to the scullery which will recommend itself. Mr. Benyon says—"I have just completed these cottages at a cost under £200. I have put the bakehouse and washhouse out of doors, as this prevents any steam from getting into the bed-rooms, and the back kitchen is made small, so as to prevent its being made a living room, which I have found to be the case in some cottages that I have built, in which the larger front room has only been made use of to hang up the family photographs." The cost quoted by Mr. Benyon evidently does not include every detail. The woodcut, page 428, shows Mr. Benyon's arrangement.

Provision for married people without children, and for old couples whose children have left them, is a desideratum of importance; and the single bedroom cottage, erected by the Duke of Bedford (woodcut 3), is a very good one for the purpose. But the plan suggested by Lady Caroline Kerrison is perhaps superior, inasmuch as the bedrooms are all on the ground floor, and are therefore more suitable for old people than bedrooms upstairs.

Lady Kerrison's plan is shown at page 429.

An arrangement for the accommodation of unmarried men has been adopted in different forms, and it is quite certain that there is no branch of the subject which deserves more careful consideration, although at present it does not receive the attention it ought.

The late Prince Consort viewed this object with considerable interest, and at the Flemish Farm his Royal Highness erected a cottage specially designed for the accommodation of carters and unmarried men upon the farm.

Several instances might be mentioned where the unmarried labourers have been provided for by the erection of a number of bed-rooms under one roof, with a common mess-room, and supplied with a kitchen and offices, under the charge of a selected matron.

It is needless to say that such a provision goes far to prevent evils attending the admission of lodgers into cottages, and, as such, is worthy the attention of the philanthropist and the land-owner.

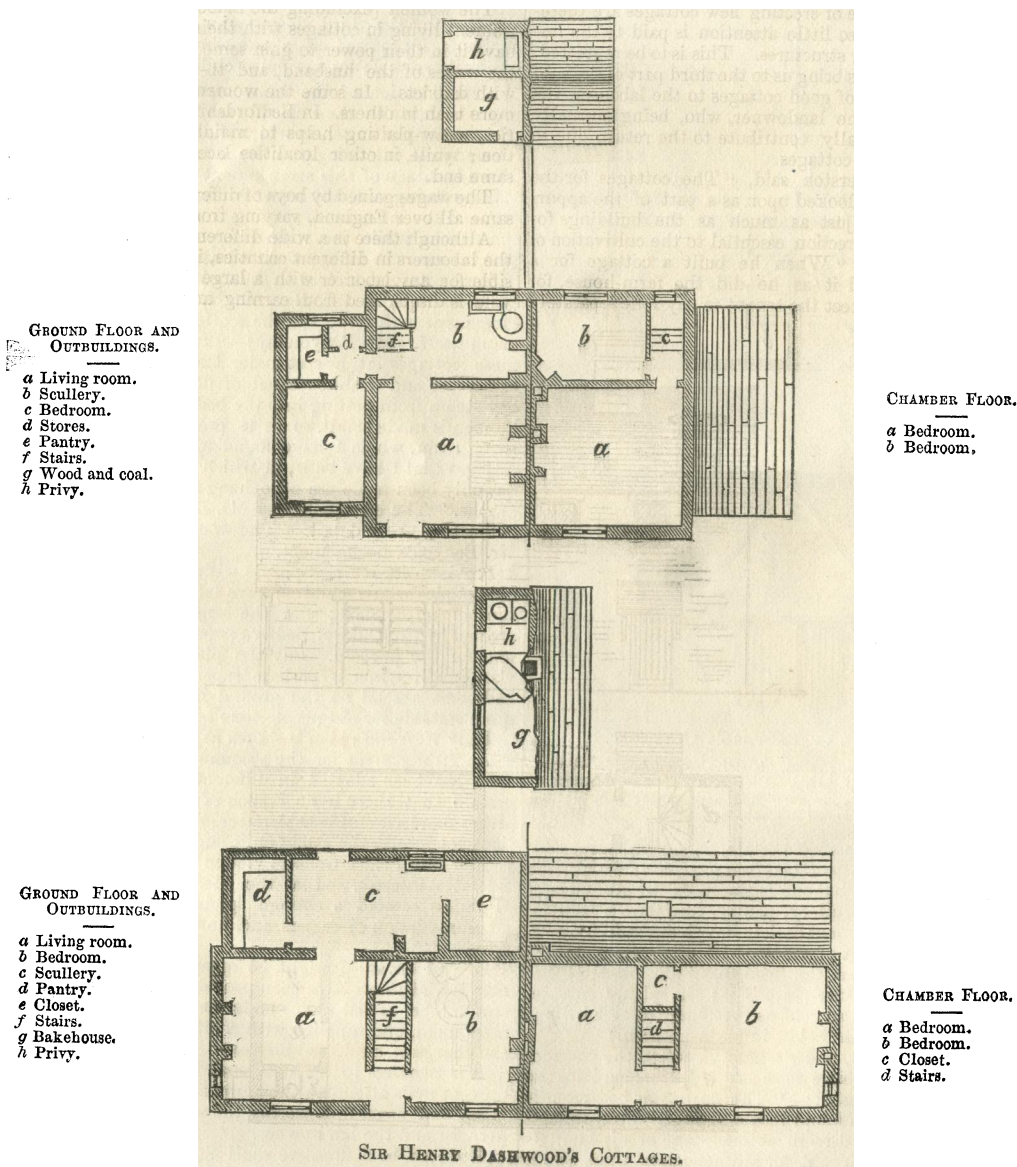
Reduced to figures, we shall find that three-bedroom

cottages will cost from £180 to £150 each; those with two bedrooms from £90 to £130 each, and those with one bedroom only from £70 to £100. The mean return required to repay principal and interest in 30 years may be taken at £8 a-year for the first, £6 12s. for the second, and £5 for the last description of cottage.

With respect to the improvement and alteration of old cottages to meet the requirements of the present day, much has been done and much more can be done. The best practical illustration of this fact is to be found at Broadlands, the estate of Lord Palmerston, where everything that can conduce to the comfort of the labouring poor has been studied with the greatest possible interest. Lord Palmerston has said, and proved, that "it is not necessary to pull down old cottages to build new ones. A great deal can be done, at a moderate cost, in improving the old ones." His lordship added, when he said this, "That the effect of improving these dwellings is almost marvellous. In the first place, the comfort of a

man's house depends on the tidiness of a man's wife, and on the mode in which she tries to make him comfortable. But there is a temper of the human mind which is denominated recklessness. When a thing seems impossible, it is given up in despair. When a cottage is in such a 'ramshackle' state that it is impossible for the wife to keep it clean, she becomes a slattern; everything goes to ruin; the man is disgusted, and flies to the beershop."

At Broadlands, Lord Palmerston has personally superintended the enlargement and alteration of his old cottages, so as to render them free from those objections which are so repugnant to good feeling. Sufficient bedroom accommodation, good drainage, and ventilation have been his primary objects, while the poor man's comfort has been studied by the substitution of boarded for stone or brick floors, and by the provision of those little conveniences, such as cupboards and shelves, which we all know how to appreciate in our own houses. Several local societies have been established in different parts of England for the purpose of



encouraging the improvement of existing cottages. It would be difficult to specify them, but in most cases the object has been to advance money to the poorer owners of cottages for the purpose of inducing them to build bed-rooms to existing tenements; and one society went so far as to offer a bonus or gift of £5 to such owner as would add an additional bed-room.

Without entering upon any details as to the cost of alterations and additions which may be made to existing cottages to render them conformable to present views, it is manifest that very much may be done with them at a less expense than by the erection of new cottages, an advantage which will enable landowners to adjust the rent in some measure to the circumstances of the labourers on their estates. In fact, it is to this point we must look for a means of reconciling the difficulties of the whole question. The rules laid down by the Inclosure Commissioners for the advance of money to landowners for cottage building in no way extend to the conversion of or addition to existing cottages; and the facilities for getting money for the purpose of erecting new cottages are therefore one reason why so little attention is paid to the improvement of existing structures. This is to be regretted.

3rd. These remarks bring us to the third part of the subject—the advantages of good cottages to the labourer, the tenant farmer, and the landowner, who, being mutually benefited, must severally contribute to the return due to the provision of good cottages.

When Lord Palmerston said, "The cottages for the labourer ought to be looked upon as a part of the appurtenances of a farm, just as much as the buildings for cattle, or any other erection essential to the cultivation of the land;" and that "When he built a cottage for a labourer he regarded it as he did the farm-house, for which he did not expect the tenant to pay rent separately

from the land," his lordship correctly expressed the connection of the labourer with the land upon which he is employed; and, although there are many who object to the dependent condition to which a labourer is reduced by occupying a dwelling from which he may be ejected by his employer, it is a position, nevertheless, from which it is not possible to rescue him as long as he is unable, out of his wages, to pay the full rent due for his home.

The limits of the present paper forbid our dwelling upon the wide topic of labourers' wages, which it will no doubt be said should be sufficiently high to enable every man to pay his own rent as a free agent, and that the dependence of the labourer upon his employer for his home is a species of serfdom from which he should be relieved. For the present, we can only deal with the question of wages as we know them to be. In the northern counties, the average weekly wages of able-bodied men employed on farms will be found to be 13s. 6d.; in the midland counties they will be 11s., and in the southern counties not quite 10s.

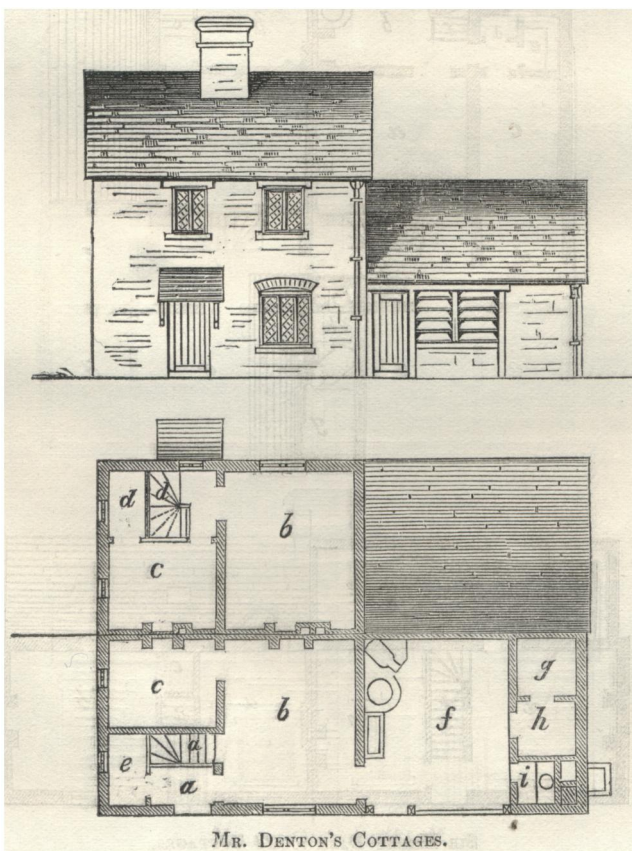
The women (excluding the indoor servants and dairy-women) living in cottages with their husbands or families, have it in their power to gain some money, in addition to the wages of the husband, and these contributions vary with districts. In some the women assist in field-labour more than in others. In Bedfordshire and adjoining counties, straw-plaiting helps to maintain the rural population; while in other localities lace-making answers the same end.

The wages gained by boys of different ages are about the same all over England, varying from 4d. to 1s. per day.

Although there is a wide difference in the earnings of the labourers in different counties, in no instance is it possible for any labourer with a large family, by which the wife is disqualified from earning anything, to pay 3s. 6d.

CHAMBER FLOOR.

- a Stairs.
- b Bedroom.
- c Bedroom.
- d Closet.



GROUND FLOOR.

- a Porch.
- b Living room.
- c Bed-room.
- d Stairs.
- e Pantry.
- f Scullery.
- g Coals.
- h Wood.
- i Privy and ashpit.

a week out of his wages. The advantages to the labourer by the acquisition of a good cottage are, nevertheless, considerable. He will have greater comfort and improved health; but although these benefits will render him physically better able to do his work, they do not enable him, in nine cases out of ten, to earn more wages, and thereby to pay more rent. If his cottage is placed on or near the field of his labour, he will gain more time in which to work in his garden and enjoy his home, and to this extent he is pecuniarily benefited. But, with this advantage, the utmost a labourer can pay in the way of rent is from one-sixth to one-seventh of his earnings; and assuming his wages to be, as in Hants or Dorset, ten shillings per week, with double wages at harvest, it follows that 1s. 6d. per week represents the amount he can set aside for rent. In the Midland Counties, by the same rule, the proportion due to rent will be 1s. 9d., and in the Northern Counties 2s. per week. There is an advantage however to the labourer in a comfortable cottage which he may not directly acknowledge or appreciate, and therefore for which he would be disinclined to pay. One of the certain effects of a comfortable home, with the cleanliness and tidiness which it begets in his wife and children, is to keep him from the public-house,

and thereby to avoid the expenditure of his earnings in beer.

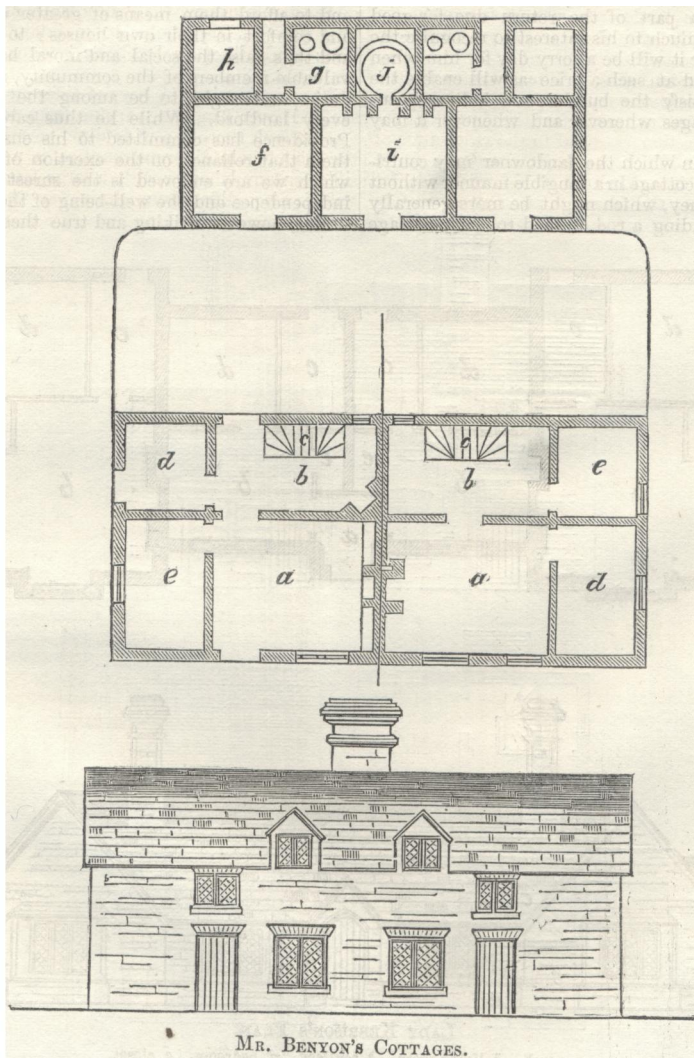
I believe no one interested in the welfare of the labouring poor will grudge the cottager the advantage of this saving, but, on the contrary, will rejoice in his thus helping him to a means of educating his children.

The advantages of well-built and well-placed cottages to the tenant-farmer, in securing labour at the time and at the place where it is wanted, can hardly be overrated. Well-placed cottages will not only secure the farmer a choice of his labourers, but will secure him that protection for his stock and property which the presence of selected men on the spot will be sure to gain. He will moreover save the time and strength of his labourers by securing that portion of both which would otherwise be expended in walking to and from the farm. It has frequently been said that the farmer loses nothing in this respect, but that as his labourers are bound to be on the scene of their employment at a given time, and to leave it at another, the loss of both time and strength is theirs and not their employer's. Those persons, however, who look carefully into these assumptions are of a very different opinion.

The advantages to the employer of well-placed, comfortable cottages for his labourers will certainly justify

GROUND FLOOR AND OUT-BUILDINGS.

- a Living room.
- b Scullery.
- c Stairs.
- d Pantry.
- e Bedroom.
- f Wood shed.
- g Privy.
- h Pigsty,
- i Bake house.
- j Oven.



CHAMBER FLOOR.

- a 1st Bedroom.
- b Landing.
- c Stairs.
- d 2nd Bedroom.
- e 3rd Bedroom.

MR. BENYON'S COTTAGES.

him in paying a proportion of the rent. The aggregate value of the advantages has been estimated at different amounts, from 1s. to 2s. a week. If the mean be taken, then, the tenant farmer may be regarded as paying 1s. 6d. per week more in wages for selected men placed where they are wanted.

The advantage to a landowner of a good cottage tenantry is quite equal to, though not so manifestly direct in its results as, that to the labourer and the tenant-farmer. Leaving out of consideration all regard for the duties of a landowner in his social position, it will be admitted that the permanent improvement of his property will result more from the good character of the labouring population which is fixed, than from his farm tenantry, which, comparatively, is frequently changing.

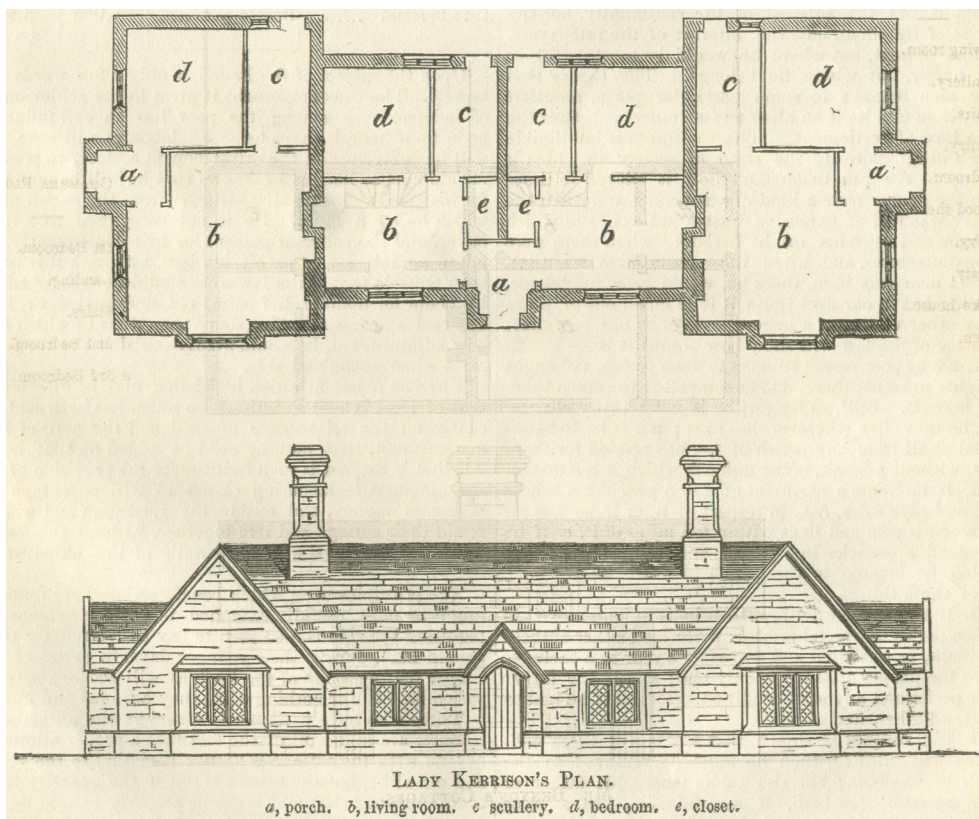
The best cultivated districts, and those which owe their high rents to the superior treatment of the land, have arrived at their present condition from the superior character of the local labourers. The good habits which comfortable and cleanly homes beget, not only secure the superior cultivation and the improved rental which results from it, but they engender a respect for property generally, and are opposed to the evils of poaching and petty depredations which characterise certain demoralized districts. On these grounds the landowner can afford to debit himself with a part of the return due for good cottages. It is very much to his interest to recognise the fact in this light, for it will be a sorry day for him when cottages can be erected at such a price as will enable the labourer alone to satisfy the builder, and induce speculators to run up cottages wherever and whenever it may suit their purposes.

There is one way in which the landowner may contribute to the rent of a cottage in a tangible manner without a contribution of money, which might be more generally adopted. It is by adding a rod of land to each cottage

occupied by an able-bodied labourer, and charging him only an agricultural rent for it. The value of land of moderate fertility to a labourer for gardening is 9d. a pole, or £6 an acre, if it immediately adjoins his cottage. The value of the same land for farming may be taken at £2 an acre or 3d. a pole; if, therefore, the cottager pays but 3d., and he is benefited to the extent of 9d. a pole, the difference of value will be 20s. a-year for the rod which the landlord will thus practically contribute towards the cottager's rent.

Before dismissing from consideration the advantage landowners will gain, a word or two should be said as to their duties with respect to the labouring classes. Most nobly did the late Duke of Bedford, in his communication to the Royal Agricultural Society of England, express what he deemed to be that duty (*Journal of Royal Agricultural Society*, vol. x., p. 186):—"Cottage building is, we all know, a bad investment of money; but this is not the light in which such a subject should be received by landlords, from whom it is surely not too much to expect that, while they are building and improving farm-houses, homesteads, and cattle-sheds, they will also build and improve dwellings for their labourers in sufficient number to meet the improved and improving cultivation of the land. To improve the dwellings of the labouring classes, and to afford them means of greater cleanliness, health, and comfort in their own houses; to extend education, and thus raise the social and moral habits of those most valuable members of the community, are among the first duties, and ought to be among the truest pleasures, of every landlord. While he thus cares for those whom Providence has committed to his charge, he will teach them that reliance on the exertion of the faculties with which we are endowed is the surest way to their own independence and the well-being of their families."

But, however striking and true these words may be, it



is quite certain that, as long as the laws of settlement and irremovability remain as they are, there is little chance of any general extension of cottage building. This is not said to justify the cruel acts of some land-owners in demolishing old cottages without building new ones, but to affirm that there will always be, so long as these laws remain unaltered, a large proportion of the landed interest who will refrain from building while there is a possibility of the cottages they build being occupied by labourers employed on other properties than their own; in which case they say and feel they will only be preparing their own punishment, inasmuch as a residence of three years prevents removal, and gives a labourer who may become a pauper a claim for relief as long as he lives.

If we appeal to the legislature for means of alleviating the difficulties of the case, there are indeed several points towards which attention may be directed. First, to the alteration of the Law of Settlement, or irremovability just referred to, with a view to encourage the building of new cottages. Second, to the amelioration of the Poor Law, which discourages provident habits in the labouring poor. And third, to the encouragement of sound benefit societies, whereby the labouring poor may provide for old age as well as for sickness.

In speaking of the Law of Settlement, the *Saturday Review*, of February 20, says:—"Like many other parts of our legislation, different portions of it have been enacted at different times, and in different spirits; but the course that has been taken of constantly cobbling up the old law, instead of trying once for all to set the matter on a rational basis, has caused even our most modern legislation on the subject to be infected to a considerable extent with the vices which pervade the early acts of parliament to which the later ones had to be adjusted. The general view that runs through the whole is that every poor man is a burden, that he is attached to some parish or other, and that the paramount interest to be considered in disposing of him is not the interest of the community, nor the interest of the man, but the interest of the ratepayers. Let him be kept, not where he would be most useful or most happy, but where he belongs. The theory that every man belongs to some particular place, and that everywhere else he is an alien on sufferance, pervades the whole Law of Settlement. The sentiment is intelligible enough in reference to the state of society in which it grew up. We can understand how it existed in times when the gentry were a kind of aristocracy, and when the country was full of extensive wastes and woods in which squatters and vagrants might harbour—when there were few manufactures, and when the presumption was that, where a man was born, there he would grow up, labour, and die; but in our own times it is as much out of place as any other vestige of a bygone state of things. A short summary of the law will show how absurd it is:—

"1. Every poor person belongs to some parish, and ought by rights to reside there, and be compelled to return there if he leave it. Still, so long as he is not actually chargeable, he may live wherever he likes; nor is he to be removed at all from any parish if he has resided for three years, without a break, in the union in which it is situated.

"2. If he rents a tenement of £10 a year for a whole year, and pays rates, &c., in respect of it, or if he has an estate of his own and lives within ten miles of it, or if he was bound apprentice in a parish and resided under the binding, he belongs to the parish in which he has done any of these things.

"3. If he has done neither, then he is to be removed to the last parish in which his father performed either of these conditions, or was hired and served for a year as a bachelor before the pauper attained twenty-one; and if the father never performed any such condition, resort must be had to the grandfather, and so on.

"4. If it cannot be shown that any one of these conditions was fulfilled, then he must be removed to the parish he was born; but the parish where his father or other ancestor was born, if ascertainable, has a prior

liability, and the remoter the ancestor the stronger the claim, if no settlement has been gained in the interval.

"We have described the origin of these derivative settlements. Their practical cruelty is as atrocious as their absurdity."

No words can more forcibly express the evil of the present state of the law than these, nor more ably present the necessity of legislation. Our agricultural population is decreasing in a most remarkable degree, owing in some measure no doubt to the influence of the higher wages given for labour in other paths of industry, but also to the deficiency and inferior character of our rural dwellings.

The population of 1851 and that of 1861 is given below, in three districts of three counties in the south, in the centre, and in the north of England, and by comparing the returns of the two censuses, the falling off will be seen. At present the scarcity of labour is not felt, but it cannot be a wholesome state of things that the number of agricultural labourer should decrease, while all other branches of the nation's industry are on the increase.

COUNTY.	DISTRICT.	POPULATION.	
		1851.	1861.
SOUTH.			
Sussex	Uckfield	17,681	17,260
Dorsetshire	Wimborne	17,284	17,253
Devonshire	South Molton ..	20,566	19,209
MIDLAND.			
Huntingdonshire ...	St. Ives	20,594	19,654
Lincolnshire	Holbeach	19,134	18,402
Nottinghamshire ...	Newark	30,344	30,186
NORTH.			
Yorkshire, N. Riding.	Thirsk	12,760	12,299
Northumberland ...	Alnwick	21,122	21,053
Cumberland	Bootle	6,008	5,880

Upon the subject of the Poor-law only a few words can be said. The discouragement it gives to the achievement of independence among the poor has an evil influence upon their moral character. No labourer will save, nor will he contribute to the safest benefit society, to provide for old age, as long as he knows that he will be punished for his care, by losing all assistance from the parish upon which he has a claim. He is not recognised as a ratepayer, and the collector passes him by; consequently, he takes no interest in parish burdens, although it is more than possible that if the law were modified, so as to admit his claim for home relief when old and past work, in a different and less offensive shape than that in which it is now administered, he would gladly contribute to the poor-rates when young and able.

The last object to which legislation may be directed is that of local benefit societies. So much has been said recently on the advantages of good and the evils of bad management, that nothing need be added on that head. All that is desired is such facilities for the provision of old age among the labouring classes, as will encourage the saving of money, and enable the aged man and wife to retain their cottage and live together, without the fear of separation within the dreaded walls of the union work-house.

The principles upon which benefit societies are founded might be most usefully extended to cottage gardens, by requiring the able-bodied men to pay such a rent for their garden-land, during their younger days, in excess of the simple renting-value of the land, as will secure the occupation for little or nothing when they are aged and infirm.

Those who have particularly observed the agricultural labourer are cognizant of the fact that a proper allotment of land with the cottage is highly beneficial to the young and old alike, but the benefit is lost if the quantity is increased beyond that which can be properly treated by the

able-bodied labourer after the labours of the day are over, or if the physical powers of the labourer have become so impaired by age as to disqualify him for the use of the spade and thereby to do justice to the land.

Speaking my own conviction, I may say that although abstractedly it is right that in proportion to the acreage of cultivated land in each parish so should be the number of dwellings for labourers within it, I have more faith in the influence of mutual interests than in any amount of legislation. I hope I have shown that the interests of landowners, tenant-farmers, and farm-labourers are all unitedly promoted in the improvement of agricultural cottages; and a general acknowledgment of this fact, with an admission that each should contribute in one shape or another to the return due to the capital employed in the outlay, will accomplish all we want, for it will leave the labourer with only that proportion to pay which is consistent with the amount of his weekly wages.

DISCUSSION.

The Hon. and Rev. S. BEST said the whole cottage question was surrounded with difficulties, and he did not think they must for one moment allow themselves to run away with the idea that the blame of the present grievous state of the country rested upon the shoulders of any particular class. The duties of landowners had been particularly referred to, but he asked them to consider what was the position of many of the landowners. Some held only for their own lives, and some only for the lives of others, and there were others whose interests were limited in various ways. How, then, was it possible that any general scheme should be adopted which should render the landowners, under such varying circumstances, responsible for the state of the cottages of this country? He had come to the conclusion, after considerable experience, that they would never solve this question till they could get a marketable return for the capital invested in cottages. They asked persons to build cottages, which, he believed as a general rule, would cost £125 each under the most favourable circumstances, but the return for such cottages was, as a general rule, in his own district, about a shilling per week. Besides this there were repairs which, in the case of cottages, were larger in proportion to their value than in houses of a higher class. Under these circumstances it was clear that cottage-building would not be undertaken commercially. When the landowner was asked to put up cottages for his labourers, he was, in fact, asked to pay a portion of their wages. Was this a fair demand? The proper condition appeared to him to be that the tenant who had the advantage of the work done by the labourer, should pay him fair and adequate wages for it. It was said to be difficult indeed to raise the labourer's wages, but that was a point it was impossible to discuss on this occasion; he must, however, say incidentally there was no great effort made to pay the labourer according to his work. Anybody who had had much to do with the details of a country parish, knew that there was a sort of head-money system; whether a man was a skilful and industrious labourer, or not, the same amount was paid for his labour. He hoped, as they paid their servants and others in proportion to their skill, so they would treat the agricultural labourer. Whenever they should have arrived at that point, he thought they would have taken one important step towards securing for the labourer such accommodation in the shape of cottages as he required. He hoped the day was not far distant when they should so educate the labouring classes of this country, that they would not be satisfied with the degraded hovels into which they were now put; and the demand, coming from the lower classes themselves, would compel those above them to provide the requisite accommodation. He did earnestly hope that these causes combined would lead to the accomplishment of that which he was sure they all so sincerely desired.

Sir THOMAS PHILLIPS rose with some reluctance to

address the meeting, because he thought many of his friends around him were better acquainted with the subject than he was, and he had hoped they would have given their own experience and suggestions upon the paper which had been read to them by Mr. Denton. But regarding this topic as one of primary importance, applying (if all the labouring classes were included) to the dwellings probably of 15 millions of people, and to something like 3 millions of habitations, he agreed with Mr. Best in thinking the question was really an economical one. Possibly legislation might do something. He was not sure it would do as much as Mr. Denton imagined, but it was no doubt the duty of the legislature to facilitate, by all proper means, the providing of suitable dwellings for the community. The question was a national one, and should receive the aid of every private person as well as of the state, to bring about the desired result. Legislation ought no doubt to be directed to the facilitating of the acquisition of sites for houses in those places where, without legislation, they could not be obtained. Whether in certain special circumstances the legislature might even extend compulsory powers to the acquisition of land for houses he was not prepared to say. In some shape or other it was obvious, where cottages were required, there should be some power of obtaining the land necessary for their erection. To that extent it was possible legislation might do something. Then with regard to the operation of the poor law, the law of settlement, and the law of relief, it was true those laws had no doubt operated in inducing landed proprietors to take down cottages, or to obstruct the erection of cottages. But they must take the law of settlement with its advantages and disadvantages. No doubt anything which prevented the full circulation of labour was an evil in itself, but on the other hand anything that tended to remove the independence of the labourer was also an evil; and he apprehended at least they would find it was absolutely essential to have local supervision in the administration of relief, and he did not see how that could be given without some definition of chargeability and some definition of removability which would operate in restricting the circulation of labour. He believed, however, that they must after all direct their attention to the economical view of the question. As long as the labourer was not able by the wages he earned to pay the rent of a good cottage, he feared he must live in an inferior one. Therefore it was entirely a question of wages, namely, what the labourer could afford to pay for his cottage. They had been told this evening, and he believed truly told, as far as his own personal experience went, that the cost of cottages approached £300 per pair, though under special circumstances it might be less, and that cost represented a rent of 3s. per week. The agricultural labourer, they knew, under favourable circumstances, did not earn more than 12s. per week, and 10s. might be regarded as the average in the southern parts of England, and out of 10s. a labourer could not appropriate 3s. for rent. It seemed to him, therefore, the great problem was how to increase the labourer's wages; how to improve his position. And this problem involved important moral considerations. They had undertaken the better teaching of the labouring man, and imbuing him with healthier and more elevating sentiments; and in proportion as he was educated and humanized so would he be induced to feel that he ought to be properly and decently lodged, and his family placed under better moral and sanitary influences, and by that means they would induce the demand for a better cottage, and so ultimately lead to the supply. He regarded the advantages as being very largely of a moral kind. Those conversant with rural districts knew that nothing so much contributed to the demoralisation of the labourer's family as their being improperly lodged. Therefore it was, he believed, one of the problems that ought to occupy, and indeed did occupy, a large share of the attention of all thinking men, namely, how they could benefit

the rural labourer in this respect. He thought the suggestions of Mr. Denton, as to the improvement of existing cottages, were of great value. He believed the cost of erecting new cottages did disincline men to undertake the work, and if the improvement, and enlargement occasionally, of existing cottages were undertaken, a great deal might be done to accomplish the ends they had in view. The direction of public opinion on this matter was indicated by the drawings they now saw on the walls of this room, which had resulted from the liberal offer, by Mr. Denton, of prizes for the best design for labourers' cottages. He (Sir Thomas Phillips) regarded this as amongst the many proofs that they were alive to the great importance of this question, and he could not help thinking that, being alive to it, they would, with the practical qualities which generally distinguished his countrymen, put their shoulders to the wheel and take adequate means to remedy these serious evils.

Mr. HENRY SMITH (Government Drainage Inspector) hoped they were not to wait for the improvement of cottages either till the labourer of Dorsetshire and Wiltshire was able to pay 3s. or 3s. 6d. a-week rent, or till the labourer himself became so educated that he would demand cottage accommodation; but he hoped public opinion and public feeling would be brought to bear upon the owners of property to induce them to erect better cottages, and to improve the condition of the labourers upon their estates. They were much indebted to gentlemen like Mr. Denton for offering premiums for designs of cottages; they were also indebted to anyone who agitated the subject of the improvement of these habitations. He did not quite agree with Sir Thomas Phillips, that it was a question solely of per-centage upon the outlay on the cottages. They found practically in those districts where the highest scale of wages was paid—in Durham, for instance, where the ordinary pay of the agricultural labourer was 3s. a day—there were still as bad cottages as in Wiltshire and Dorsetshire; therefore it was not solely a question of wages. He contended it was to the interest of the landowner to build good cottages; and though the labourer was not able to pay him 5 or 6 per cent. upon his outlay, still the tenant farmer was able to pay a portion of that, the landlord was able, by the improvement of his estate, to pay a portion, and the labourer himself was able to pay the other portion. He knew, as a practical farmer, there was great advantage in having the labourers residing upon the spot. He knew this by his own experience. He considered he derived considerable benefit from having cottages on his own farm. He assumed that he got equal to a shilling a week rent in the advantage of having the labourer near to his work: the landlord obtained a larger rent for his farm because it was well stocked with cottages wherein the labourer could reside. It was only on the principle of this division of benefit that they would be able to improve the labourer's cottage; and he was of opinion if landlords erected cottages on their estates, and divided the interest of their outlay fairly between themselves, their tenants, and the labourers, the great object would be accomplished.

Mr. C. F. HAYWARD remarked that so much had already been said, in the course of this discussion, that little was left for him to add, except in confirmation of much that had been advanced. He considered the remarks of Mr. Best, with respect to the wages of the agricultural labourer, had hit upon the sore point in the condition of that class. It was quite certain they were generally under-paid, and their wages were supposed to be partly made up by the amount they paid for their cottages, their gardens, and the other little advantages they were supposed to receive. He had no doubt that ultimately this state of things would be remedied, and that when the subject was sufficiently ventilated it would be seen it was to the advantage of all concerned that the wages of the labourer should be paid to him in money, and

that he should return a certain portion of those wages in the shape of rent. Time was when in the agricultural districts the tenant had to provide certain conveniences and perform certain services for the landowner, the evil of which had been shown in a recent action at law between a noble proprietor and his tenant, and that system, as well as estimating the rent of the labourer's cottage as part of his wages, would rectify itself. The practical point to be considered was how, under certain circumstances, labourers' cottages could be improved, and they were much indebted to Mr. Denton for bringing this subject under their notice. As one of the judges of the designs submitted for competition, in reference to Mr. Denton's offer of a premium, he (Mr. Hayward) thought it was satisfactory to find that their views were so much confirmed by Mr. Denton himself on the subject of the cost of these cottages. It was no use blinking the question of the cost, because it was now fairly before them. It had been asserted over and over again that good cottages could be built for £100 each, but having investigated the subject a good deal, he had come to the conclusion that it was only under peculiar circumstances that what were called cheap cottages were built. He had inquired into various cases of this kind, and in some instances it turned out that the bricks were made at odd times on the estate by the workmen connected with it, and cost on the spot only 17s. per 1,000; the timber used was grown on the estate, cut down, and sawn by the labourers on the estate; the building was superintended by the bailiff amongst other duties included in his ordinary salary, so that there were no builder's profits, or anything of that kind. In the examination of the designs, now hung on the walls, it had been necessary to inquire into the particulars of the estimated cost to see if they had been calculated fairly to meet the ordinary circumstances of building. There was one practical point of great importance which Mr. Denton had referred to, viz., the convenience of having one bed-room on the ground-floor. He (Mr. Hayward) thought that decidedly important, because in many cases it was desirable, inasmuch as the upper and lower floors could thus be better arranged with regard to each other as to space. When three bed-rooms were provided on the upper floor they required the ground-floor to cover a larger area than was absolutely necessary. It was a mistake to give too much area to the ground-floor. If they made the scullery too large it was found, as Mr. Denton had observed, that what was intended as the living room was converted into a parlour to be used only on Sundays or holidays. He had known cases in which the useful appurtenance of a corner cupboard had been objected to because it interfered with putting a sofa into the room. While on the one hand they might err in endeavouring to provide too great luxuries for labourers' cottages, yet on the other hand they must recollect that in the modern dwellings of the middle and upper classes of society the conveniences had been very much increased; and in a certain degree he thought these improvements might fairly be extended to the labourer's cottage. The now common plan of laying boarded floors was a luxury as compared with the tiled or brick floor of former days, and the plastered interior walls were a decided improvement upon the rude "cob" walls which were still frequently met with in the rural homes of the country. The designs now upon the walls ought not to be regarded as conclusive upon this subject, but rather as a fresh starting-point, and they must go on discussing the matter till it was brought home to people's minds in every part of England. Many noblemen, and large landed proprietors, had already shown their interest in the subject. Foremost among those were Lord Palmerston and the Dukes of Bedford and Northumberland. It was stated by Mr. Roberts that the two latter noblemen had spent nearly £200,000 in cottage building on their estates, and from what he knew of those on the Tavistock estate of the Duke of Bedford, they were remarkable for comfort

and convenience; at the same time they were erected in large and long blocks, and built under the superintendence of a gentleman connected with the Duke's estates, and he believed the average cost of those cottages was only £120 each, for, when building was executed on a large scale, on an estate where the usual builder's profits did not occur, of course the cost would be less than when simply a pair of cottages was to be erected.

Mr. WEBBER said the tendency of the discussion this evening was to leave on his mind the impression that there were many things desirable which were not practicable. They were told that the building of a cottage to ensure the comforts they desired for the agricultural labouring class would cost £150, but that their wages would not allow them to pay a rent adequate to that outlay. It appeared to him, in the consideration of this question, they had left out of sight the important material of timber. In various parts of America he had seen many timber houses, and he should be glad to hear from Mr. Denton what would be the cost of this material as compared with brick. He should imagine it would be much less. He quite agreed with the opinion that if they had to wait for suitable cottages for the labourers till their wages enabled them to pay the rent, the object they sought would not be realised in the present generation.

The CHAIRMAN, in closing the discussion, said he thought this question must be considered as one of wages and of capital; but then the question arose—Of what did wages consist, and of what did capital consist? Wages, especially in agricultural districts, must not be taken simply as money received for labour, but they must be looked at, whether paid in money weekly or by other arrangements, as a means of obtaining the greatest amount of labour from a given expenditure. With regard to the question of agricultural cottages, expenditure incurred to improve them must be considered as a substitute for money wages to the labourer, and as the best means of improving his condition, for the better he was lodged the fewer days of sickness he would have in the course of the year, the higher state he would be in during the whole period he was at work, the greater amount of labour would he give to his master, the greater protection he would afford to the estate; and altogether the man who was kept in the best social and physical condition would undoubtedly be the best servant to the master who employed him. Therefore when they considered the cost of an agricultural cottage, and said that it could not be built unless the landlord received a money return as interest upon the amount invested in that cottage, he thought they took a short measure of the real benefit he received from such an investment of his money. This was a question so large and complicated that it was impossible, in an evening of this kind, to sift and investigate it thoroughly, and bring into view the importance of this great subject—for undoubtedly it was a national question of the highest moment, affecting the interests of several millions of the population. The Society had appointed two days (the 26th and 27th) in the present month for a conference, to which all persons taking an interest in the subject were invited, in order to give the public the benefit of their opinion, and of the information they possessed, with the view of suggesting, if possible, some remedy for the evils which were acknowledged to exist; but whether they could be remedied by legislation was a difficult question to determine. Undoubtedly they legislated for lodging and feeding prisoners; they legislated for those who were unable to work for themselves; they legislated for soldiers; they provided, at an enormous expense, all the materials for war; but they had not attempted to legislate for the encouragement and protection of those latent elements of good which existed in the working classes of the country. Was it to be said that it was impossible to bring into play, by legislative means, the latent principle of good which existed among the agri-

cultural labourers of this country, but which was now smothered, and frequently destroyed, by the want of comfort and decent accommodation in the homes of working men? Were they to remain under the obloquy of spending millions annually in providing for the punishment and cure of vice and the materials for carrying destruction wherever they were used, whilst they refused assistance to those who were struggling to do their best to prevent them becoming a burden to society? Therefore, though it was at present difficult to say in what form legislation should proceed—and he hoped some views on that question would be elicited at the approaching conference—he trusted some remedy might be found for the evils now produced by the inadequate house-room for the labouring classes. There were great principles, however, on which this question rested, which must not be forgotten. They must not forget that wages could not be touched by legislation, and this led him to one portion of the paper which referred to the decrease of the agricultural population, and the corresponding increase in the manufacturing districts. Instead of lamenting this migration, he said, let it continue still more, for by that means only would they drive the landlord to pay higher wages to secure the labour they wanted. So long as commerce paid a higher price for labour than agriculture, so long let commerce take from agriculture the labour it required, and let agriculture tempt back that labour or prevent its leaving by paying for it at the same rate as commerce did. They would then find the effect of legitimate competition to secure the best services of the best men, and in the agricultural districts part of that payment for labour would no doubt be provided by finding good cottages and gardens for the men. He now had to say a word respecting the capital applied to cottage building. They were told a rental of 3s. per week was necessary to pay a certain per centage upon the cost, but nobody asked how much per cent. was necessary to induce builders to erect gentlemen's houses, although, no doubt, ample interest was paid for it. Why should not capital derive an equal rate from cottages? It was not the want of demand for them that prevented it, and he would not believe that it was inseparable from the condition of a cottager that he should be unable to pay adequate interest on the capital which had been employed in building his house. But the real question for consideration was what could now be done to secure better house accommodation for this class? Their attention had been this evening almost confined to single cottages, or at the most, to pairs; but ought they not to look to a series of houses rather than to isolated cottages? If they wished to produce the cheapest and best buildings, was the double cottage the best form of construction? Then there were many other very important points for consideration, bearing on this question, as to whether relief from fiscal burdens could not be afforded to certain classes of buildings. But this was too wide a question for this evening, and he would only say that he thought there were many forms which legislation might take, which would give greater facilities to the working man for obtaining and keeping a cottage of his own, and it was by those facilities they would increase and improve the accommodation they were contending for, for if a man possessed a cottage of his own he would not be content with such as they now lived in. He would conclude by asking the meeting to thank Mr. Denton for the ability and talent he had shown in bringing this interesting subject before them.

The vote of thanks having been passed,

Mr. BAILEY DENTON, in acknowledging the compliment paid him, said he entirely agreed with the remark of Mr. Henry Smith, that if they had to wait for improved cottages until the wages of the labourer were raised they would probably be likely to wait till the end of this century. The Chairman had expressed what he (Mr. Denton) meant when he said the money paid to the labourers was not the only element of wages. If the

tenant-farmer contributed to the labourer's comfort by finding him a house, and the landlord by providing him with a garden, those were two elements which required to be taken into consideration. He knew the popular idea was that wages meant simply money paid. Now, until they understood this subject differently, he thought they would remain without any proper provision of cottages. In fact, it was the desire to get that part of the subject understood that led him to bring this matter forward. With regard to timber-built cottages, he was not prepared to answer the question as to the cost, when compared with brick, inasmuch as proprietors did not recognise timber as being sufficiently substantial for building purposes.

Proceedings of Institutions.

LIVERPOOL INSTITUTE.—The lecture-hall of this Institute, which is an amphitheatre, with a gallery, and contains accommodation for about 1,200 persons, has recently been decorated according to designs supplied by Mr. H. B. Roberts, of the Liverpool Academy of Art, to whom the ornamentation of the Philharmonic-hall was entrusted on the last occasion. Mr. Roberts has produced a beautiful result in design and colour, and the painting and marbling have been creditably executed by Mr. Davis, of Rathbone-street, the contractor for the work. The ceiling is painted fawn colour, with border of double Greek key ornament in brown, and corners inlaid with red honeysuckle. The centre is white and gold, with red mouldings and band of blue and white, ornamented with purple honeysuckle. The chandelier is stone colour and gold. The skylights have been re-glazed with plate glass. The counter lights are painted Etruscan brown, the styles grey, with purple ornaments and gold mouldings. The large cove is painted pink, resting on a cornice of white and purple scroll work, harmonising with the walls, which are green. The doors of the gallery are purple, green, and gold. The pilasters in the niches are painted Sienna marble, and on each is placed a bust of some one eminent in science, art, or literature. The organ is a special object of attraction; the columns are painted in imitation of jasper marble, with white parian caps and gold mouldings, and resting on a base of porphyry, with panels of Egyptian green marble; the pipes are blue and gold: the cornice and arch white, gold, and pink, with frieze of blue and white ornament. In the gallery front the balusters are buff and gold; the pilasters buff and black, with grey and red styles; the frieze is stone colour inlaid with pink panels, and purple ornament, in gold mouldings. The light iron columns which support the gallery are encircled with strap-work ornament, and have caps of white and gold. Hitherto this hall has been used only for lectures and meetings in connection with the Institute; but in future it will be available for public meetings, lectures, and concerts, the directors having determined to let it for these purposes.

RICHMOND YOUNG MEN'S SOCIETY.—On the 26th of April a meeting was held in the Lecture Hall to present Mr. W. Robinson with a token of their esteem for his energetic services as secretary, and to award the prizes granted during the session to successful essayists. The testimonial consisted of an electro-plated tea service and an ornamental timepiece, with the design, "Palissy surveying the success of his enamel." The prizes consisted of books chosen by the young men themselves. The Rev. L. H. Byrnes, of Kingston, took the chair, and in opening the proceedings said that these societies were needed at the time when lads left school, and went into the world, where new and powerful influences would be operating, and the youth would find it difficult to maintain principles imbibed in early days. G. F. Whiteley, Esq., was called upon to present Mr. W. Benning with the prize for his Historical Sketch of Tunbridge Wells. Dr.

Wilkie was requested to present the prize awarded for the best essay on "Character" to Mr. H. Cullum. Rev. G. S. Ingram spoke at some length on the composition of essays, urging the advantages arising from the exercise of thought. A mind capable of extensive observation was desirable in all that would wish for a place in the world. He who would write to interest must necessarily take a wide range of thought, contemplate the subject in its different bearings, and draw careful conclusions. Style was an essential part of literary composition, and should receive more attention than was usually bestowed upon it. Rev. J. Banham said that work was a duty proclaimed by Divine law, and scarcely less so by the sentiment of civilized man. He that would not work was refused any claim upon the privileges of society. As indolence might be termed the parent of vice, so industry might be regarded as the progenitor of happiness. W. J. Maxwell, Esq., presented to Mr. W. Robinson the testimonial for which the meeting had been principally convened. He spoke on the utility of such societies, and referred to the debt due to the energy of their promoters, especially referring to Mr. Robinson as an example of industrious integrity and energy. He considered the testimonial as very appropriate. Mr. Robinson replied that he was grateful to the society for the way in which they had recognised his past labours. He had found great pleasure in discharging the duties of the society. He had seen it in sunshine and in clouds, and his solicitude for its success was as strong as ever. He felt deeply indebted to other members of the committee, without whose aid his services would have been comparatively valueless.

Fine Arts.

A PROPOSAL FOR AN ART RESULT SOCIETY.

By C. BRUCE ALLEN, ESQ., ARCHITECT.

The Art Result Society would be founded on the fact that none of the Fine Art Educational Societies now existing seem competent to raise art, as applied to common objects in daily use, from their now artistically inexpressive state, as they are now executed by common workmen.

Whatever may have been the means employed in past times for the production of works in common and daily use artistically expressed, and whatever, whether great or small, the means of art education of those times, it is quite certain, from the remains those times have left us, that the whole artistic power and means of expression of the artists and workmen of those times, ultimately found their way directly to the object itself, whether great or small, whether a building or a jewel, and did not confine itself as that artistic power now does to paper and representations.

This past mode of work it was that now enables us moderns to fill vast museums and exhibitions with such costly and beautiful work—with such evidences of the artistic capacity and high art feeling of the men of past days. It is the mode of work which has made the difference between a cathedral of the thirteenth century—as an expressional artistic result—and a modern railway station; between a cup or coin by Benvenuto Cellini and a modern race cup, or a penny piece.

It is not, therefore, the men and artists who are less able now than they were, but that the system of art education primarily, and the artist action finally, that would seem to be the causes of this world-wide difference and former excellence, and of the present art-nothingness and almost universal failure. The artistic faculty and power of the present time may be fairly said to be wholly expended, and, it is to be feared, lost, on paper and in representations: the final result, the object itself, whatever it be, whether a building or a coin, in all cases being executed by inferior men, *i.e.*, workmen and not artists.

That the remains of old art—the work of the artists of past times—has indeed this almost infinite superiority over the fine art products of the present time, would seem to be proved beyond any possibility of doubt, by the price so readily given for “antique art,” fifty to a hundred and fifty pounds, and sometimes more, being obtained for a very ordinary cup and saucer—the sole difference between them and their modern copies, at a cost of as many pence, being simply that the first were the works of an artist, and actually executed as well as designed by him; and the modern copy is a work of manufacture, and executed by a mere workman in whom the artistic element is wanting.

In buildings, too, this modern inferiority is to be noted, the sole difference between the works of the present and the past lying in the fact of the details of the old work having been the actual hand-work of artists, *i.e.*, of artist workmen; and the building of to-day being the result of a division of labour and the actual hand-work of simple workmen, and not artists or artist workmen. We may compare the decorative work now going on in St. Paul's Cathedral with the art decoration and wall painting left to us in the Westminster Chapter House—the one the result of labour, and the other of artist labour. The artistic element of design may in any two given works be equal, but the final result different, according to the mode of execution. It would be, therefore, in the mode in which the artistic process is applied that this proposed new society, or extension of the art action of one already existing, would endeavour to create and help forward a radical change. It would ask not only design, but execution—not only for artistic design expressive of modern wants and feelings, but for artistic execution embodying and carrying out in material such design.

It would regard designs and drawings on paper as means only, and not as ends, as is now the universal art practice, and would ask for the final result of all art power and action, whether in artists or workmen in material, *i.e.*, the object itself. Not copies of old work by artists and workmen who have long since passed away, but new work, both in design and execution. It would demand modern results.

Another element in this proposed society would be—and it is a most important one—recognition. In all cases the artist and workman would be credited with his work—irrespective of the architect, manufacturer, or seller—whether he be the artist draughtsman and designer on paper, thus indicating the work to the executive workman, a work now always to be done, or whether he be the artist workman, the actual executant. This is the one great essential of future progress in fine art. It may here be observed that absolutely perfect work can only be accomplished by the mind and hand of one man, like a picture. The original thought, the design, the drawing, and the actual execution, must be the result of the successive action of the mind and hands of one person, a single intellectual and manual feat in fine art.

But the spirit of modernism and manufacture having compelled a division of this simple and primitive mode of art work, it necessitates two distinct elements or powers—the draughtsman to indicate the proposed work, and to show to the workman how it is to be done, and the workman himself to execute the work. It is obviously inferior to the first mode, but it is now the only practicable one, and in almost universal use. Every object in which fine art at all enters that is to be seen in our shop windows, the true receptacles of the art of a nation—has been produced by this twofold process, the making of the indicative drawing or design by an artist draughtsman, and the execution of the work itself by the workman. Both these art means it must be the business of the proposed society to recognise and encourage, by demanding both the drawing of the draughtsman and the work of the workman. The last is now, happily, being done in many ways, but, unfortunately, not modern work, but copies of past work; but the first, the drawing by the draughtsman, without which the modern workman cannot act, has never

yet been asked for. It is as important as the work itself, for without it, the object itself, the final result, as a work of art, whatever its value, could have no existence—our modern art workmen not being able to draw a design.

But this mode of action, driven, as we must be, to it by the modern system of the division of labour, need not hinder, but would tend rather to encourage, the society, to ask of the draughtsman, on the one hand, for a specimen, if possible, of his executive power in material; and it would, on the other hand, equally ask of the workman a specimen of his powers as a draughtsman, and would, it is to be hoped, so tend to urge him to learn and cultivate his fine art faculties as a draughtsman as well as an executant.

The society would also, for its highest work, ask of our artists art work in material, which, although so novel in modern times as to seem almost impossible in practice, was, in past times, the common practice in the production of works of fine art, indeed, the sole way; and it is therefore hoped that, at least in some cases, our leading artists will be induced to contribute results in material, if only by way of example and encouragement, and to show what is possible. Past ages have left us of the present age not drawings or representations on paper of what they thought and did, but their fine art thoughts wrought out in the enduring materials dug from the earth, made living by the impress of artistic and individual power upon them; while this age will leave nothing whatever as evidence of its artist strength but what is to be found on paper, and the feeble and lifeless reflections of it by the hands of other and inferior men.

It has been said that the great principle of the division of labour is indeed the moving power of civilization, and must, therefore, extend itself to all branches of science, industry, and art; but it would be the vocation of this society to enunciate the great art truth, that while this division of labour and power of machinery are legitimately competent to multiply the coins from a single die, they are not competent to cut the die itself. This is artists' work, and the work of one man, and one only. The chief and practical objects, therefore, of this proposed society or of any others that might spring from it, would simply be to offer prizes annually to artist workmen and also to artist draughtsmen for specimens of their combined skill, *i.e.*, for the working drawing by the draughtsman, which served to guide the workman in his work; and also prizes for the actual work itself, as finally executed by the workman. These two elements in the production of modern fine art, whatever it may be, are so intimately connected together, that the one cannot go on without the other; the workman is at present unable to work without either the direct copying of some detail of old art, or architecture, or the detailed drawing of the future work as prepared for him by the artist draughtsman.

It would also initiate a great social object by bringing into acknowledgment and notice, and, it is to be hoped, encouraging a hitherto unnoticed and unrecognised class of men, and a class from whom society mainly obtains the art in all the objects it sees and uses, *viz.*, the class of artist draughtsmen in our art manufactories. It is these men who serve to fill with art objects the shop windows, and from them our houses, with their furniture, china and glass, fabrics, and decorative work, indeed, everything but pictures.

It must be anticipated that the progress of such a society as this now proposed, or societies, if more than one, must of necessity be very slow, for not only have the workmen and artists to be invited to work in a new and strange way, but the public mind itself is not at all instructed as to the causes of the difference between the now manufactured and the real art.

But, difficult as must be even the first beginnings of such a society, the great idea on which it is based—that of the individuality of the artist—now nowhere recognised except in painting, but which in all the great epochs of art must have always been the sovereign idea, does yet

perpetually, as all great truths will, flash across the minds of thoughtful men.

A most illustrious authority has said—"In comparing the works of past times with those of our own age and country, while we may well be proud of the immense development of knowledge and power of production which we possess, we have reason also for humility in contemplating the refinement of feeling and intensity of thought manifested in the works of the older schools." In this emphatic sentence will be found the keynote to the future of art.

THE FINE ARTS IN PARIS.—In Paris, as in London, May is the festival month of painters, sculptors, and all the other devotees of the temple of beauty, the season of hopes and fears, of triumphs and sad disappointments. The annual exhibition of the works of modern artists opened, as usual, on the first day of the month, and, that being Sunday, the public was admitted without charge, and the gallery, large as it is, was densely crowded. A private view, however, took place on the Saturday, and the members of the press and the principal artists had the advantage of a quiet examination of the collection on that and also on the preceding day. As regards paintings, the fact of the exhibition being now annual, instead of biennial, seems to have had very little influence on the number of works sent in; in round numbers nearly three thousand pictures were received, each artist being limited to two works instead of three, the number allowed last year; and of these two thousand were accepted, and form the exhibition proper of that section. Two large departments of the gallery are set apart for the rejected, but, as may be supposed, the greater number of those whom the jury has struck out, have taken care to hide the evidences of their non-success, and the consequence is, that these two rooms exhibit a most deplorable aspect. The exhibition certainly exhibits a vast amount of ability, an immense painting power, but the number of great works is, perhaps, less than upon any former occasion for a considerable number of years. The limitation of each artist to two works has greatly contributed to the mediocre character of the collection, as there are some three or four artists who, having before received medals, or distinctions in other forms, are exempt from examination by the jury; and had each been allowed to send three examples, the proportion of good, or, at any rate, of fair pictures, would have been greatly increased. The limitation of two works is pretty generally condemned as a mistake, and it is believed that it will not be repeated. There is another reason for the pooriness of the exhibition, in the absence of a large number of the leading artists from various causes; amongst others, of Cabanel, Flandrin, Couture, Pils, Troyon, Baudry, Jalabert, and Muller. Several of these gentlemen have refused to exhibit from the fact of their being members of the jury; death has snatched away Hippolyte Flandrin; and Troyon, the admirable landscape and animal painter, has been visited with sore affliction, and has destroyed with his own hand one or more of his finest productions. The exhibition cannot be said to be strong in any department, but the number of works is vast—nearly four thousand in all—and the mere manual dexterity of the greater portion of the exhibitors so remarkable, that an observant student would spend a week most satisfactorily in studying the exhibition. The whole system of rewards has been changed; for some years it has been the habit to give one grand prize, nominally a medal, but really a sum of four thousand francs, three first-class, six second-class, and twelve third-class medals in the sections of painting and drawing, half those numbers in that of sculpture, and a proportionate number for engraving, lithography, and other works, and, in addition to these, a large number of "rappels," or records of exhibitors deserving any medal which they had previously obtained, and a mass of honourable mentions. These latter honours have been long felt to be worthless, and they and the rappels are

now abolished. The rewards established this year consist of two grand medals of honour, one for painting and the other for sculpture, and each of the value of four thousand francs, and of forty medals in painting, fifteen in sculpture, eight in engraving, and four in architecture, all of the same value, namely, four hundred francs, and paid entirely in cash if desired. This medal is only to be bestowed three times on any one artist, the recipients then becoming entitled to the cross of the Legion of Honour. The awards, contrary to former practice, have been announced at the outset of the exhibition, and are recorded on the frames. The jury has also made another innovation, namely that of placing the word "exempt" on the works of those artists who, having previously received medals, are emancipated from the dictum of the admission jury. The grand medal has not been awarded in the section of painting, the jury having found no work deserving of the honour; and that in sculpture has been assigned to an artist who died during the year, and who left only an unfinished statue. Count Nieuwerkerke, the superintendent of fine arts, has performed a very graceful and judicious act in giving free admissions to all the students of the Imperial School of Fine Arts. Some months since a great change was made in the constitution of the school just referred to, the administration of which was taken from the Academy of Fine Arts and placed under a separate commission, consisting of a few members of the academy itself joined with a certain number of eminent artists, outside of the academy, and a few officials connected with the Imperial museum. This gave rise to loud complaints on the part of the academy, and it is said that the members have determined to mark their sense of the proceeding, and to show the public at the same time their own power, by establishing an exclusive exhibition of their own works.—The Emperor has purchased a copy in mosaic, by Professor Maglia, of Raphael's Virgin with the child; the work is of the same size as the original, and occupied the artist nearly seven years. The price paid was 85,000 francs (£1,400).—The repairs of the great northern door of Notre Dame have just been completed, as far as regards the stone work, and the statues are now placed in their niches over the south door, so that the restoration of this beautiful church may be looked upon as approaching a conclusion.

EUGENE DELACROIX.—The Société Nationale des Beaux Arts has decided on organising an exhibition of the works of the late Eugene Delacroix, to take place in its rooms on the Boulevard des Italiens. M. Théophile Gautier is the president of the committee entrusted with the work of collection and arrangement, and several eminent artists and men of letters are included in the list of its members.

FINE ARTS IN BORDEAUX.—One of the most remarkable provincial exhibitions in France, namely, that of Bordeaux, is closed, or about to close. It originated with a few amateurs, who, in 1851, formed themselves into a society, called the Friends of the Arts, and its first exhibition took place in the month of November in that year. The original number of shareholders in the undertaking was 672; the municipal authorities of the town voted a sum of 3,000 francs, and the conseil-general 600 francs in aid of the first exhibition, which comprised nearly five hundred works of art. The society laid out 15,000 francs in purchases, and 8,000 more were received from private individuals. A few months after this first exhibition of the works of living artists, another was organized, to which 847 pictures by old masters were contributed by amateurs in Bordeaux alone. In 1853, the exhibition was highly successful; the authorities purchased Cogniet's picture of the "Daughter of Tintoretto" for their museum, for the sum of 20,000 francs; the purchases of the society itself amounted to more than 26,000 francs, and those of private persons raised the total to 63,000 francs (£2,520). The first twelve exhibitions of the society included more than 50,000 works of art, of which about 1,200 were purchased

either for the town of Bordeaux or by private persons in its neighbourhood; and the total receipts of the twelve fell very little short of £20,000. The Société des Amis des Arts has received great encouragement from the authorities of the town; a special gallery has been built for their exhibitions in the public garden; and the fruit of the labours of the society is to be found in the fact that several amateurs have made donations of valuable works of art, and that the museum has been enriched by the addition of seventeen fine paintings. There are many other excellent societies of the kind in France, but that of Bordeaux is perhaps the most remarkable.

THE LOUVRE.—A very important work is about to be commenced at the Louvre. The pavilion of Flora, which forms the corner of the Palace of the Tuileries towards the river, is now completed as far as the outer walls are concerned, and the new Salle des Etats, which connects it with the grand gallery of the Louvre, is in a forward state. The next thing to be done is the entire demolition of that portion of the gallery erected during the reign of Louis XIV., and its reconstruction in harmony with the rest of the gallery. This completion of the beautiful work of Henry IV., and the removal of the hideous structure of Louis' period, will be one of the greatest improvements imaginable. Unfortunately the pictures of the Flemish school will in consequence have to be withdrawn from exhibition for a considerable period. The original design of Murillo's grand work, "The Vision of Saint François attended by Angels," from the Vallardi collection, has been presented to the Museum of the Louvre, by M. P. Jacques; it will form the most precious relic of the great Spanish painter in the Imperial collection.

FRENCH ARTISTS.—Death and suffering have fallen heavily on the artistic class during the last few weeks. Flandrin has been carried off with terrible suddenness, by disease contracted by overwork and anxiety, leaving his mural paintings in the church of St. Germain des Prés to be finished by another hand. Dubufe, father of the popular painter, died at the age of 74; he was a pupil of David, and divided his time between historical and religious subjects and portraits. In the former styles he gained considerable honour, and in the latter he was the rage during the reign of Louis Philippe, whose portrait he painted; but his grand success was with female subjects; amongst his most celebrated works in this class are likenesses of the Queen of the Belgians, and of Mademoiselle Vernon, in the "Dumb Girl of Portici." He was the Lawrence of the time of the King of the Barricades. M. Allard, a promising young painter, native of Lyons, and residing since last autumn at Rome, has been murdered by a man who sat to him as a model, for the sake of the watch which he wore, and which is said to be one of the greatest temptations possible to the lower classes in that city. The money in his pockets was untouched. Lastly, poor Troyon, the admirable painter of rural scenes and animals, has become insane, and has been placed in an asylum, with little hope of recovery. Poor Watteau, the painter of courtly and elegant pleasures, died of melancholy and consumption at Nogent-sur-Marne, where a monument was erected to his memory by his friends; this was destroyed by the revolutionists of 1793, and a new one is being erected in its place by a statuary named Auvray. A bust of the painter is to be executed at the expense of the government, and the maire has opened a subscription to defray the rest of the expenses.

PICTURE SALE IN PARIS.—A very remarkable sale occurred a short time since, that of the collection of M. Eugène Piot, one of the noted connoisseurs of Paris. M. Piot has ransacked Italy for the last twenty years for works unknown in France, and the late sale proves that he has had considerable success. The sale attracted all the amateurs within reach, and the prices obtained, though not so high, probably, as they would have been two or three months since, were good. The following are the most remarkable lots:—A bust of a child by Donatello, 1386-1468, 8,350 francs, or £334; bust of

Dietisalvi Neroni, who played a great part in the republic of Florence and was a great friend of Cosmo de Medici, by Mino de Fiesole, 1406-1486, £280; a statue of the Virgin seated, with the infant Jesus standing on her knees, by Antonio Rossellino, 1427-1490, £136; the Virgin with the infant in her arms, alto-relievo, with winged Cherubim, £134; the following works by Michael Angelo—Portrait of himself, 1475-1564, a replica of that in the Audience Chamber of the Capitol at Rome, from the collection of Comte Bianchetti, of Bologna, withdrawn at £400; a statue about fifteen inches high, supposed to be the original of the colossal statue of David, £202; Samson slaying the Philistines, a group of three figures, not higher than the preceding, £241—this subject is said to have been designed as a pendant to the statue of David, but not to have been carried out—a panel of a door by Lorenzo Ghiberti, 1381-1455, representing an architectural framing with two groups, an angel delivering a prisoner, and another angel guiding a saint, £104; the Martyrdom of St. Sebastian, by Donatello, a small work, £108; and a winged child with a fish on its shoulder, a small statuette intended for a fountain, £160.

A FINE PICTURE BY RUBENS DISCOVERED.—The director of the Salle d'Orient, at Brussels, has made a fortunate discovery. At a public sale of curiosities he purchased, for ten francs, a picture covered with dust and cobwebs, and somewhat injured into the bargain, and upon having it cleaned the connoisseurs declared it to be an undoubted Rubens. The subject is, "The Tavern de la Madeleine," and the fortunate possessor has refused forty thousand francs for it.

Manufactures.

CHINA GRASS.—The manufacturers of Rouen are turning their attention seriously to the applications of China grass. The Chamber of Commerce was the first to move in the matter, a report was drawn up by M. Cordier, and specimens of the plant and its products in all stages of manufacture were exhibited to the public, and attracted considerable attention. Recently to these have been added samples of tissues of the grass mixed with wool and cotton; these are the produce of the works of M. Bertel, and have been printed by Keitinger and Sons. The landed proprietors of the departments of the Bouches-du-Rhône and the Aisne and the government have made arrangements to secure and distribute a supply of the seed.

MANUFACTURE OF FINE EARTHENWARE IN FRANCE.—It is said that the French government is about to establish a school at Nevers for the instruction of young workmen in modelling, drawing, and painting for ceramic work. Nevers was the cradle of the art in France, an Italian named Corviade having about the beginning of the fifteenth century introduced the manufacture there, and his son was appointed by Louis XIII., "*Gentilhomme faïencier*" of the king's household. Nevers fell before the Royal establishment of porcelain at Sevres, and its *faïence* was for some time forgotten; recently, however, it has sprung up again and attracted attention, and there is no doubt that the establishment of such a school as that proposed would have a great effect in aiding in the resuscitation.

PORTABLE COFFER DAM FOR CLEANING AND EXAMINING THE BOTTOMS OF SHIPS.—Capt. Mc Killop drew the attention of the Institution of Naval Architects to a coffer dam, consisting of a flexible iron framing and a covering of india-rubber cloth or leather, which can be passed down a ship's side so as, with the side of the ship, to form a tube from which the water can be pumped out. The vessel can by this means be either examined or cleaned, as a man may be sent down a ladder inside it. If it is merely wanted to remove fouling, the ladder may be left out and the lining of the coffer dam brought nearly

close to the ship's side, unslaked lime and other substances being dropped in from the water's edge as the machine goes down. When in position, the machine is moved along the bottom by guide ropes. The slaking of the lime destroys the grass and incrustation. Adhesion between the machine and the ship's side is secured by an inflated tube passing down each side and round the bottom of the machine. The machine may also be used to stop a leak, and may be kept on the leak during the remainder of the voyage without great detriment to speed. It can also be used as a raft.

THE ATLANTIC TELEGRAPH.—On the 29th April, a large party of gentlemen interested in the Atlantic Telegraph, met at the Gutta Percha Works, in Wharf-street, City-road, and witnessed every separate process of manufacturing and testing the cable. There were present, among many others, the Marquis of Tweeddale, Mr. Bright, M.P., the Hon. W. M. Evarts, Mr. Percy Salmon, Mr. Seward, Captain Hamilton, Mr. Glass, Mr. Varley, Mr. Edwards, and Professor Wheatstone. The electrical tests incidental to the operations of isolating the wire were conducted with great nicety. Fuses were fired by means of a current despatched through sixty miles of the coated wire. The manufacture of the cable differs at almost every step from the process adopted six years ago. It is nearly twice the size, and the weight of the copper strand which forms the conductor is considerably more than doubled, the number of pounds avoirdupois to the nautical mile being 300 to 107. The insulation is said to be improved, Chatterton's compound, with which the copper strand is first coated, and which alternates with the successive layers of gutta percha, binding them firmly together, and excluding air. Protection against rough external influences is obtained by substituting for the eighteen strands of charcoal-iron wire laid spirally round the core, with a padding of tar-saturated hemp between, ten solid wires of homogeneous iron, each wire surrounded separately with five strands of Manilla yarn, saturated with a preservative compound, and the whole laid spirally round the core, which latter is padded with ordinary hemp, steeped with preservative mixture. The breaking strain of the old cable was 3 tons 5 cwt.; while in the present case it is 7 tons 15 cwt., and in other essential respects great improvement has been attained. The mode of splicing is now materially improved.

Commerce.

THE EXPORT TRADE OF FRANCE is gradually increasing. According to the last official returns published the exports from the 1st of January to the 1st of April amounted to 692,506,000*f*. During the corresponding period of the year 1861 the exports amounted to 463,839,000*f*.; in 1862 to 507,265,000*f*.; in 1863 to 594,490,000*f*. The principal articles of which the export has increased are silk stuffs, woollen cloths, millinery, linendrapery, dressed skins, toys, wine, brandy, and chymical ingredients. The import duties increased during the same period to 40,138,000*f*. from 37,196,000*f*. in 1863, and 33,875,090*f*. in 1862. England is the best customer for French manufactured silks, inasmuch as she takes more than the half of all that is exported. England likewise takes more than one-half of the woollen stuffs exported from France. The best customers, however, for coarse woollen cloths are Belgium, Germany, and Italy.

THE SILK TRADE continues to improve at Lyons. The price of the raw material is firm, but not so high as to prevent manufacturers purchasing all they require. The scarcity of Chinese and Japanese raw silk is the only unfavourable circumstance to be remarked. The supply is not equal to the demand, and it is feared that ultimately the supply of European silk may not be sufficient. The appearance of the silkworms throughout the departments of the Ière, Var, Drôme, Gard, and Vaucluse is satisfactory. Japanese silk is becoming every day more esteemed

in the French markets, but it does not reach them except through England. The raw silk exported last year from Japan amounted to 22,000 bales, of which only a small portion reached France. The merchants of Lyons and Marseilles are now making arrangements to receive silk direct from Japan. The French commission agents who have gone to Japan find more facilities there than in China. The climate of Japan is incomparably superior, and the silk grown there is finer and takes the dye better. The export of raw silk from Japan has greatly increased within late years. The entire export from the 1st of July to the 28th of October last year amounts to 6,834 bales, against 5,701 during the corresponding period of the year 1862. These 6,834 bales represent a value of more than £640,000.

TEA.—The imports of tea have experienced a great expansion this year, as compared with 1863, when a considerable corresponding progress was made. Thus the total imports during the first three months of 1864 amounted to 22,277,065 lbs. against 17,093,365 lbs. in the corresponding period of 1863, and 18,452,904 lbs. in the corresponding period of 1862. The total imports for 1863 amounted, however, to 85,206,779 lbs., as compared with 78,817,060 lbs. in 1862. A considerable portion of the increase observable in the imports for the first quarter of 1864, as compared with the corresponding three months of 1863, is accounted for by the larger exports effected this year as compared with previous quarters, the total for the three months ending March 31, 1864, having been 8,012,067 lbs. against 5,037,077 lbs. in the corresponding period of 1863, and 5,070,404 lbs. in the corresponding period of 1862.

SEED AND OIL TRADES.—The reported damage to the Continental rape crops has considerably enhanced prices of all seeds.

Colonies.

A CANADIAN TELEGRAPH COMPANY.—A new company has been organised in Canada, called the Provincial Telegraph Company, with which the United States Company will be connected at Suspension Bridge and at Montreal. One of the most important features of this enterprise is its probable connexion with a line to Europe, to which the attention of the public has not been called. This line is from the coast of Labrador, via Greenland, Iceland, and the Faroe Isles, to the north shore of Scotland. The longest distance from shore to shore is less than 500 miles—a less distance than cables are now successfully working in the Mediterranean.

ACCLIMATISATION IN THE COLONIES.—A Lyttelton paper says that the work of acclimatisation has been carried on with great energy during the past year, and with considerable success. The societies under whose auspices the work is promoted have been well supported pecuniarily, and their funds have enabled them to introduce numerous birds and animals from all parts of the world. Many encouraging instances of actual acclimatisation have come under notice, several of the quadrupeds and ornithological specimens that have been liberated from the preserves in which they have hitherto been kept, having been found to multiply, and apparently thrive as well as in their native homes. Acclimatisation societies have also been established in Queensland, and Invercargill, and local branches of the Victorian Society have been formed in the towns of Ballarat, Beechworth, and Portland. The New Zealand Society has made an excellent beginning, and £300 has been voted in its aid by the provincial council, £50 for the introduction of game, and £250 for salmon ova. There are obvious reasons for encouraging acclimatisation in New Zealand, a country that, though blessed with a climate well adapted to the constitution of the animals of a large portion of the world, was singularly destitute of animal life when first colonised. The receipts of the Victoria

Acclimatisation Society for the last year were £3,595 14s., including a government grant of £2,400. There is every probability that the British salmon will shortly be introduced into Tasmania, where the acclimatisation society have made arrangements for securing a supply of ova. The gouramy, from the Mauritius, has been actually landed alive at Adelaide, and there is no reason to doubt that this excellent pond fish will shortly be established in the colony. A reservoir near Melbourne has been supplied with English tench, and other reservoirs are stocked with English dace. The Murray cod is now completely established in several of the rivers.

MELBOURNE.—A private letter says that business has been lately very dull. The prevailing inactivity is attributable to two causes, viz., the uncertainty existing with regard to the fate of the customs duties bill, and the inclemency of the weather. The former has been read twice in the legislative council, but it is not thought that it will be read a third time in its present form. There has been a great deal of rain lately, and floods have again occurred at Maitland, on the Hunter River, which have done a great deal of damage. Another cause of the existing depression is the bad harvest, inasmuch as the loss of the crops has impoverished many of the small farmers, who are consequently in many cases obliged to do without the necessities of life almost, which acts directly on the country storekeepers, through them on the trade. Sydney. Money has been scarce of late.

Notes.

STEAM PLOUGHING IN FRANCE.—A steam ploughing match, under Imperial auspices, has recently come off at Roanne. The novelty of the operations, in a district characterised by its primitive modes of agriculture, attracted a large concourse of spectators. Several French engineers took part in the competition, and appeared very confident of success; but the first prize of £100 and the gold medal have come to England, the winners being Messrs. James and Frederick Howard, of Bedford.

EXHIBITION OF BUILDING MATERIALS.—An exhibition of all the matters employed in construction, rough and in any stage of preparation, is announced to take place at Olten, in the canton of Soleure, Switzerland, on the 18th of August. The matter has been taken up very warmly by the Swiss authorities, and the railway companies have offered to convey exhibitors, visitors, and materials at half the usual prices.

BRITISH MUSEUM.—The annual accounts of the British Museum have been laid before Parliament. The entire expenditure in the past year has amounted to £95,000, of which about half went in salaries and incidentals, and the other half in purchases and in the expense of repairs and maintenance of the building, the rooms and the collections, and in bookbinding. The attendance of the public to view the general collections fell to 440,801 in the year 1863—less than half the attendance in 1862 (the Exhibition year), and a smaller number than for several years past. The number of visits to the reading-room also declined considerably, falling from a number always of late years exceeding 120,000 to 107,821, or an average of 372 a day on the 200 days on which the room was open. Each reader consulted on an average 11 volumes in the day, and the whole number of volumes consulted in the year is estimated at 1,222,484. The total number of articles added to the library in the course of the year, including newspapers, broadsides, engravings, maps, and miscellaneous pieces, was 107,784. Of complete works 45,020 were purchased, 10,072 acquired by copyright, and 1,129 presented. In the natural history departments above 100,000 specimens have been added in the course of the past year, and Professor Owen reports that, although the extent of previous acquisitions leads to ever-increasing reticence and care in selection, the progress of the addi-

tions is such as fully to verify the anticipations on which the requirements of space have been estimated. The additions include specimens from the African expeditions and the North American boundary expedition, and contributions of great scientific value from the Linnæan and Entomological Societies. The department of zoology has been enriched by a donation from Mr. J. Bowring of above 80,000 specimens of coleopterous insects, the largest and most instructive accession to the entomological department ever presented by one individual. Very large additions have been made to the collection of fishes; among them may be mentioned a collection from the Lake of Galilee. Valuable additions were made also to the other departments—the botanical, mineralogy, geology, antiquities, and ethnography, coins and medals, prints and drawings.

NEW NATIONAL GALLERY.—An estimate has been presented to Parliament proposing a vote of £10,000, the first instalment of £152,000, which is the estimated cost of building a new National Gallery at Burlington-house, including finishings and decoration. In forwarding the estimate, the First Commissioner of Works states that the estimate is for the erection of the National Gallery on the site purchased by the Government in Piccadilly, consisting of about three and a-half acres, of which one-half is occupied by Burlington-house, with its two wings and its colonnade, and by the courtyard which they surround. These buildings are occupied by the Royal and other societies, which need not be disturbed at present, since the garden, which occupies half of the site, will furnish ample accommodation for the pictures, ancient and modern, belonging to the trustees of the National Gallery, and also for the additions to the collections which may be expected by gift and purchase for many years to come. Whenever, however, a large increase of space may be required, Burlington-house and its wings will be pulled down to make room for an extension of the National Gallery, and in the meantime the courtyard will make a handsome and convenient approach to the main entrance of the new building, which will be through the central hall of Burlington-house. The proposed building will be 300ft. long and 218ft. wide. That part of it which will be devoted to the exhibition of pictures will be of one story, lit from the ceiling, and will provide 3,000 lineal feet of wall-space in a horizontal line, exclusive of doorways, and 36,200 superficial feet of floor space. The larger galleries will be 40ft. wide and 40ft. high, and the rooms for small pictures will be 21 ft. wide, with a proportionate height. The only external elevation that will be visible will be at the northern side, in Burlington-gardens, where the board-room and offices of the trustees and the residence of the keeper will be placed in two stories, and where there will be a public entrance. On the southern side, where the level of the ground is lower, there will be a useful basement story, and the whole building will be of fireproof construction.

Correspondence.

VACANT NICHES IN LONDON.—SIR,—The letter of "Complete your Work," in your last number, touches on a subject that I have long thought deserving attention, and I hope it may claim to some good purpose the notice of the Society of Arts. Excellent statues in stone and terra cotta, can doubtless be produced, and such, in the atmosphere of London, would probably be quite as durable as marble, and far less costly. Your correspondent has alluded to the massive unoccupied pedestals that adorn the space in front of the British Museum, and he might have cited those in Trafalgar-square. I would, however, call attention to the numerous niches, all untenanted, which occur in the outer walls of St. Paul's Cathedral, and the twelve or fourteen suited for statues or vases in the Cornhill front of the Bank of England. There are

also vacant niches in Newgate, but as the position might not be thought honourable, except in the eyes of an architect, perhaps they had better be reserved for mythological personages.—I am, &c., **CONSTANT READER.**

MEETINGS FOR THE ENSUING WEEK.

- MON.** ...British Architects, 8.
R. United Service Inst., 8½. Commander R. A. Scott, R.N., "Progress of Ordnance Abroad.—Subject continued. American Heavy Guns."
TUES. ...Statistical, 8. 1. Mr. P. M. Tait, "The Mortality of Eurasians." 2. Mr. W. G. Lumley, "The Statistics of Roman Catholics in England."
Royal Inst., 3. Professor Marshall, "On Animal Life."
Pathological, 8.
Anthropological, 8.
Civil Engineers, 8. Mr. G. R. Burnell, "On the Machinery employed in Sinking Artesian Wells on the Continent."
WED. ...Society of Arts, 8. Mr. James Lowe, "On Oyster Culture."
Pharmaceutical, 11 a.m. Annual Meeting.
R. Society of Literature, 4½.
THUR. ...Chemical, 8. 1. Dr. Gladstone, "Chlorophosphide of Nitrogen." 2. Mr. Dancer, "Constitution of Wood Spirit." 3. Drs. Williamson and Russell, "Apparatus for Gas Analysis." 4. Dr. Williamson, "Atomic Weights of Metals."
Numismatic, 7.
Zoological, 4.
Royal Inst., 3. Mr. John Hullah, "On Music (1600–1750)."
FRI. ...Philological, 8. Annual Meeting.
Royal Inst., 8. Mr. James Nasmyth, "On Day and Night in the Moon."
SAT. ...Royal Inst., 3. Mr. Alex. Herschel, "On Falling Stars, &c."

Patents.

From Commissioners of Patents Journal, May 6th.

GRANTS OF PROVISIONAL PROTECTION.

Aniline dyes, purple, violet, and blue—981—H. Levinstein.
Animal matters, preservation of—959—W. Clark.
Artificial leather—1001—H. A. Bonneville.
Bonnet and hat falls—1056—J. White.
Boots—1020—S. P. Feldman.
Brick-making machinery—1030—J. M. Pratt.
Bricks, tiles, &c.—1002—J. Jones.
Cables, submarine electric telegraph—1013—J. R. Croskey.
Caissons, coffer dams, &c.—1005—J. G. Jennings.
Capsules, metallic—953—J. H. Johnson.
Carding engines—1039—H. Marsden.
Carriages, construction of—946—A. H. A. Durant and W. H. P. Gore.
Cerealine, manufacture of—965—A. V. Newton.
Cereals, apparatus for sifting or sorting—962—W. E. Gedge.
College caps—1028—D. Lewis.
Condenser, continuous self-acting—983—J. Brière.
Corn seed and manure, drills to sow or deposit—1032—J. J. Smyth.
Cotton gins—839—T. Bourne.
Cotton gin—1006—J. G. Rollins.
Cotton seed, treatment of, to separate the cotton from—977—G. Bur-stall.
Cotton seeds, treating a product from the oil of—952—C. Doughty and W. D. Key.
Cranes, crab winches, &c.—942—S. Moore.
Doors, &c., preventing the slamming of—948—W. Ovenden, sen., and W. Ovenden, jun.
Engines, motive power—932—T. W. Miller.
Engines, rotatory—963—M. B. Cooper.
Electric telegraph apparatus—940—J. McElroy.
Fluid pressure, signalling by means of—800—J. P. Ferris and K. H. Cornish.
Fluids, apparatus for raising and forcing—1026—T. P. Tregaskis.
Fire-grates—987—S. Harrison and W. Clements.
Garments, &c., spring hook or fastening for—1016—W. L. Barnes.
Gas, manufacture of—990—A. C. Fraser.
Gates and doors, fastening for—976—J. E. Spratt.
Gun carriages, checking the recoil of—950—G. W. Rendel.
Harness, &c., apparatus for cleaning the metal parts of—1059—R. A. Brooman.
Hoing land, machinery for—960—A. Priest and W. Woolnough, jun.
Hollow axles and axle boxes, &c.—1018—J. Thompson.
Inhaling apparatus—1012 G. Davies.
Iron caissons, sinking of, for foundations under water—980—J. Shaw.
Iron, &c., facilitating the puddling of—1036—H. Bennett.
Jacquard cards, machinery for connecting—1041—W. E. Newton.
Keyless watches—967—W. Ehrhardt.
Knapsacks, &c., mode of carrying—1049—T. S. Truss.
Liquids, apparatus for measuring—961—W. Payton.
Looms—982—W. G. Cooper and J. Fletcher.
Looms—1029—D. Hussey.
Lubricators—1014—J. C. Rivett.
Madder, treating products of—925—F. A. Gatty.

Magnesium wire, apparatus for burning—870—E. Aldis.
Manures, preparation of—955—J. C. Coombe.
Oils, distilling and purifying hydro carbon—1019—J. E. Duyck.
Omnibuses—1057—T. L. Southgate.
Oysters, propagation of—1040—W. Crofts.
Paper, machinery for drying—975—J. Stevens.
Pens—997—W. Clark.
Photographic apparatus—1000—H. A. Bonneville.
Photographic pictures photographically indelible—1060—R. A. Brooman.
Pianofortes, &c., tuning of—912—K. A. Kemp.
Plated wares, ornamentation of—984—G. Green.
Portmanteaus, &c., construction of—882—E. Pratt.
Projectiles—989—J. P. Harris.
Puddling furnaces—988—J. H. Johnson.
Pulleys and riggers—1015—W. Clark.
Pumps—894—M. Benson.
Pumps, rotary—1045—G. Haseltine.
Railway carriages, &c., lighting of—944—W. Symons.
Railway chairs, hollow iron keys or wedges for fixing rails in—1035—F. G. Grice and H. Bennett.
Railways, working points and signals of—996—H. Wadkin.
Respiratory apparatus—974—G. Davies.
Ropes and cordage—986—S. S. Robson.
Rotary engine for forcing air or water—1022—A. V. Newton.
Saw blades, &c., apparatus for hardening—1037—J. Dodge.
Ships and forts, lifting battery applicable to—1004—L. Thomas.
Ships, construction of—954—W. Clark.
Sizing substance—964—J. Riley.
Skirts, manufacture of—973—J. C. A. Henderson.
Smoke consuming apparatus—1034—R. North.
Smoking pipes—1027—A. Wardle.
Spinning and doubling, self acting mules for—994—J. Standeven.
Stamps, &c., in relief—1008—A. Leighton.
Steam boats, paddle wheels for—1061—S. Bateman.
Steam engines and boilers—951—E. Rowing.
Steam engines, slide valves of—956—H. B. Barlow.
Steam hammers—995—J. Armstrong.
Structures, foundations for heavy—985—J. Head, jun.
Surfaces, material for grinding and polishing—1003—G. P. Wheeler.
Surfaces, wheels or tools for grinding and polishing—1062—E. J. W. Parnacott.
Table tops, fastening of, without thumb screws—979—J. Edis.
Tobacco pipes, apparatus for cleaning—957—C. H. Prosser.
Trimnings, hand frames used for embroidered—939—F. Browett.
Valve, equilibrium slide—991—W. E. Newton.
Vessels, means of propelling—938—Y. Meirat.
Water closet apparatus—958—J. A. Nicholson.
Wheel dressing machines—1053—H. S. Jacobs.
Window blinds, &c., rack pulleys for—1042—A. J. Billing and J. Shore.

INVENTION WITH COMPLETE SPECIFICATION FILED.

Trees and timber, felling and splitting—1068—C. H. Pearson.

PATENTS SEALED.

2790. J. Ramsbottom.	2825. D. M. Fyfe.
2801. T. M. Reade and J. Hewitt.	2829. W. Chambers.
2804. A. C. Drust-Wild.	2833. F. Spencer and J. Dodd.
2806. W. D. Richards.	2848. T. S. Prideaux.
2814. J. J., and J. Booth.	3240. J. Giers.
2815. A. Ilingworth.	3273. J. Giers.
2816. H. Holden.	3281. T. Tozer.
2820. D. Ford.	349. J. B. Borgatta.
2822. L. E. C. Martin.	

From Commissioners of Patents Journal, May 10th.

PATENTS SEALED.

2813. B. Peake.	2880. J. Bettley.
2819. W. E. Gedge.	2889. J. Elder.
2840. H. Gladstone.	2890. J. Stewart.
2845. E. T. Hughes.	2898. J. Elder.
2846. E. Hargraves.	2908. W. Symons.
2847. A. Ellissen.	2943. C. Howard.
2849. G. Barker.	2947. T. Carr.
2853. G. Lindemann.	3047. R. Riley.
2855. L. Mackirdy.	3084. J. Wray.
2856. R. A. Brooman.	167. R. Irvine, T. Richardson,
2858. R. A. Brooman.	and J. J. Lundy.
2861. J. Walmsley.	176. W. Clark.
2862. J. Hulse and J. Lawrence.	271. E. Harrison.
2863. E. and F. A. Leigh.	398. W. Clark.
2865. S. Cameron and W. Johnston.	491. P. H. Muntz.
	665. A. V. Newton.
2866. G. Thonger.	731. A. Morel.
2867. E. W. Elmslie.	732. A. Morel.
2876. P. M. Parsons.	

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

1115. J. A. Manning.	1145. J. Burch.
1165. J. Fitter.	1134. T. Blackburn and M.
1109. M. A. F. Mennons.	Knowles.
1123. W. Rowan.	1138. W. Johnson.
1128. E. P. Smith.	1175. J. Burch.
1129. W. P. Dreaper.	

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

1273. L. Bissell.	1316. H. Hobbs and E. Easton.
1265. W. E. Wiley.	1317. R. Wilson.
1303. C. E. Darby.	